

DEPARTMENT OF THE INTERIOR, CANADA

Hon. W. J. ROCHER, Minister; W. W. COYNE, Deputy-Minister

FORESTRY BRANCH—BULLETIN No. 52

R. H. CAMPBELL, Director of Forestry.

# FOREST PRODUCTS OF CANADA

1913

COMPILED BY

R. G. LEWIS, B.Sc. F.

ASSISTED BY W. E. DEXTER and W. GUY H. BOYCE

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OTTAWA  
GOVERNMENT PRINTING BUREAU  
1915



DEPARTMENT OF THE INTERIOR, CANADA

HON. W. J. ROCHE, Minister; W. W. CONY, Deputy-Minister

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## ERRATUM.

On page 13, Table II, Ontario Lumber, Total Value for White Pine, 1913, should read \$15,396,269, instead of \$1,539,269.

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OTTAWA  
GOVERNMENT PRINTING BUREAU  
1915

THE UNIVERSITY OF CHICAGO

1917-1918

DEPARTMENT OF THE INTERIOR, CANADA

Hon. W. J. ROBIN, Minister; W. W. CONY, Deputy-Minister

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LETTER OF TRANSMITTAL

FORESTRY BRANCH,  
DEPARTMENT OF THE INTERIOR,  
OTTAWA, February 16, 1915.

SIR,—I beg to transmit herewith reports on the use of wood for (1) lumber, lath and shingles, (2) pulpwood and (3) poles and cross-ties, throughout the Dominion during the year 1913. These reports have already been published separately, and are now combined into one pamphlet for the greater convenience of readers. I would recommend the publication of this pamphlet as Bulletin No. 52 of this Branch.

Your obedient servant,

R. H. CAMPBELL,  
*Director of Forestry.*

W. W. CORY, Esq., C.M.G.,  
Deputy Minister, Department of the Interior,  
Ottawa.



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## LUMBER, LATH AND SHINGLES.

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This bulletin gives the statistics of the production of lumber, lath and shingles by 2,187 mills operating in Canada during the calendar year 1913. The figures for 1912, which were gathered from 2,558 mills, are included for comparison. These figures are practically all gathered by correspondence with the mill operators. The compilation of this information would be greatly facilitated by prompt action on the part of some of the mill operators in filling out and returning the forms sent them. The total value of the lumber, lath and shingles produced in Canada in 1913 was \$70,644,362, the separate items being:—lumber, 3,816,642,000 feet, board measure, valued at \$65,796,438; lath, 739,678,000, valued at \$1,783,283, and shingles, 1,435,279,000, valued at \$3,064,641.

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A directory of saw-mills will be found in Appendix No. 1 of this bulletin.

### LUMBER.

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Table "A" (on the next page) gives the details of the production of sawn lumber in Canada in 1912 and 1913 by provinces.

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The total production of lumber in Canada in 1913 decreased 13.1 per cent from that of 1912. The 1912 production decreased 10.7 per cent from that of 1911. It would seem as if the climax had been passed and that the production were now declining at about the same rate as it increased up to 1911. The cut of lumber in 1911 was 4,918,202,000 feet, board measure, valued at \$69,475,784

The climax of production in the United States was reached in 1909 when 48,112 mills cut 44,509,761,000 feet of lumber or over nine times as much as was produced in Canada in the climax year of 1911.

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Canada cut in 1913 a total of 3,816,642,000 feet, board measure, of lumber, valued at \$65,796,438. The cut in Ontario decreased by 20.5 per cent, while that of British Columbia decreased only 10.7 per cent. This resulted in a change of relative position, which puts British Columbia at the head of the provinces in the production of lumber, Ontario, which has headed the list in the past, falling back to second place. An increase in production in Manitoba of 82 per cent brings this province up to seventh place and drops Alberta to eighth place.

Reductions in the cut of lumber are to be noted in every province except Manitoba, the greatest proportional reduction taking place in Saskatchewan.

The average price of lumber at the mill throughout Canada increased by \$1.41, increasing in British Columbia, Ontario, Quebec, New Brunswick and Saskatchewan and decreasing in Nova Scotia, Manitoba, Alberta and Prince Edward Island. The greatest increase in price (\$4.08) took place in Ontario.

# FORESTRY BRANCH BULLETIN No. 52.

## TABLE A.

TOTAL LUMBER CUT, 1913, BY PROVINCES—Number of Mills Reporting, Total Quantity of Lumber Cut, Total Value, Per Cent of Increase, Per Cent Distribution and Average Value per M Ft., B.M.

Province.	Rank.		Number of Firms Reporting		Quantity	
	1912	1913	1912	1913	1912	1913
Canada.....			2,558	2,187	M Ft. B.M. 4,389,723	M Ft. B.M. 3,816,643
British Columbia.....						
Ontario.....	2	1	176	159	1,313,782	1,173,847
Quebec.....	1	2	811	685	1,385,186	1,101,066
New Brunswick.....	3	3	842	684	677,215	630,346
Nova Scotia.....	4	4	199	177	449,738	399,247
	5	5	361	322	312,763	247,722
Saskatchewan.....	6	6	23	25	157,255	114,800
Manitoba.....	8	7	48	50	39,535	71,961
Alberta.....	7	8	46	40	47,478	44,462
Prince Edward Island.....	9	9	52	45	6,771	6,391

	Value of Lumber	Per cent. Increase or Decrease in Cut over 1912	Per cent Distribution of Cut		Average Value per M Ft. B.M.	
	1913		1912	1913	1912	1913
Canada.....	\$ 65,796,438	13.1†	100.0	100.0	\$ cts. 15.83	\$ cts. 17.24
British Columbia.....	16,428,218	10.7†	29.9	30.7	13.50	14.00
Ontario.....	25,772,617	20.5†	31.6	28.8	19.33	23.41
Quebec.....	10,618,528	6.9†	15.4	16.5	15.79	16.85
New Brunswick.....	5,758,849	11.2†	10.2	10.5	13.44	14.42
Nova Scotia.....	3,669,264	12.2†	7.1	7.2	13.77	13.36
Saskatchewan.....	1,908,482	27.0†	3.6	3.0	16.12	16.62
Manitoba.....	946,458	32.0	0.9	1.9	13.79	13.15
Alberta.....	608,902	6.4†	1.1	1.2	15.71	13.69
Prince Edward Island.....	85,120	5.6†	0.2	0.2	13.78	13.32

†Decrease from 1912 to 1913.

Table "B" gives the details of the lumber production in Canada in 1913 by kinds of wood.

TABLE B.

LUMBER CUT, 1913, BY KINDS OF WOOD—Quantity Cut, Total Value and Average Value per M Ft., B.M., with Per Cent of Increase over 1912 and Per Cent Distribution.

Kind of Wood.	Rank.		Quantity.		Per cent of Increase or Decrease over 1912.	Total Value of Lumber. 1913.	Per Cent Distribution of Total Cut.		Average value per M Ft. B.M.	
	1912.	1913.	1912.	1913.			1912.	1913.	1912.	1913.
			M Ft. B.M.	M Ft. B.M.		\$			\$ cts.	\$ cts.
<b>Total.....</b>			<b>4,389,723</b>	<b>3,816,642</b>	<b>13.1†</b>	<b>65,796,438</b>	<b>100.0</b>	<b>100.0</b>	<b>15 83</b>	<b>17 24</b>
Spruce.....	1	1	1,409,311	1,274,215	9.6†	19,126,990	32.1	33.4	14 46	15 01
Douglas Fir.....	3	2	889,861	793,143	10.9†	10,898,978	20.3	20.8	12 33	13 74
White Pine.....	2	3	911,427	678,330	25.6†	13,502,041	20.8	17.8	20 98	27 28
Hemlock.....	4	4	333,238	306,342	8.1†	4,505,767	7.6	8.0	13 45	14 71
Red Pine.....	6	5	142,294	144,320	1.4	2,688,653	3.2	3.8	18 16	18 63
Cedar.....	5	6	156,022	101,053	35.2†	1,487,633	3.6	2.6	17 98	14 72
Tamarack.....	10	7	73,177	96,325	31.6	1,327,672	1.7	2.5	15 15	13 77
Birch.....	7	8	100,267	79,369	20.9†	1,424,236	2.3	2.1	16 36	17 95
Maple.....	9	9	77,827	73,580	5.5†	1,303,315	1.8	1.9	18 91	17 71
Balsam Fir.....	8	10	78,841	64,957	17.6†	845,955	1.8	1.7	13 62	13 02
Yellow Pine.....	11	11	53,960	58,939	9.2	874,014	1.2	1.5	16 30	14 83
Basswood.....	12	12	52,921	36,009	32.0†	773,381	1.2	0.9	17 71	21 48
Jack Pine.....	14	13	31,605	35,404	12.0	508,840	0.7	0.9	14 55	14 37
Elm.....	13	14	32,949	30,766	6.6†	651,699	0.7	0.8	20 44	21 25
Beech.....	15	15	15,417	12,983	15.8†	208,332	0.3	0.3	15 45	16 05
Poplar.....	17	16	7,523	11,136	48.0	153,376	0.2	0.3	13 30	13 68
Ash.....	16	17	12,386	10,509	15.2†	234,303	0.3	0.3	20 68	22 30
Oak.....	18	18	7,283	6,348	12.8†	207,156	0.2	0.2	29 82	32 68
Chestnut.....	19	19	1,538	1,317	14.4†	25,372	*	*	22 26	19 26
Hickory.....	20	20	667	647	3.0†	23,728	*	*	32 04	36 67
Butternut.....	21	21	573	516	9.9†	12,306	*	*	22 05	23 85
Cherry.....	22	22	351	246	29.9†	6,171	*	*	28 16	25 09
Black Gum.....	25	23	43	125	190.7	3,000	*	*	24 00	24 00
Walnut.....	24	24	61	40	34.4†	2,017	*	*	31 85	50 42
Tulip.....	23	25	150	20	86.7†	358	*	*	13 17	17 90
Sycamore.....	28	26	2	11	450.0	255	*	*	22 00	23 18
Sassafras.....	29	27		1		45	*	*		45 00
Willow.....	26	28	27				*	*	12 89	
Ironwood.....	27	29	2				*	*	20 00	

\*Less than one tenth of one per cent.

†Decrease from 1912 to 1913.

Canadian saw-mills in 1913 reported sawing twenty seven different kinds of lumber. Most of these kinds of wood are in reality groups of different species, but as these are not always separated in the reports sent in, a further classification into separate species has been attempted in only a few cases. These are discussed more fully under the individual tables dealing with the different kinds of lumber.

While spruce still formed about a third of the total production, some important changes have taken place in the relative order of the other different kinds of wood cut. The cut of white pine decreased by over a quarter, while that of Douglas fir decreased by only 10.9 per cent. Douglas fir consequently moved up to second place on the list.

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The cut of red pine increased by 1.4 per cent, while that of cedar decreased by 35.2 per cent, so red pine advances from sixth to fifth place. Among the ten most important woods the greatest decrease occurred in the case of cedar and the greatest increase in the case of tamarack. Among the hardwoods changes in relative position are more frequent, as these woods, with a few exceptions, are cut from isolated stands and lands that have been lumbered over for many years, pine, spruce and hemlock in the past. The supply of such woods is very variable from year to year.

Willow and ironwood, which were cut in 1912, were not reported in 1913. Sassafras, which has not been reported since 1911, was cut in 1913. Some of the hardwoods, such as black gum, tulip, sycamore and sassafras, are occasionally in very limited quantities in southwestern Ontario, mostly on the Niagara Peninsula and along the north shore of Lake Erie. They rightly belong to the hardwood forest of the central United States, and cannot be considered as typical Canadian species, as their range is so restricted and their occurrence so comparatively rare in Canada.

The first five woods on the list increased in price at the mill from 1912 to 1913. Out of the total of twenty seven, only eight were reported at a lower price than in 1912.

### HARDWOODS vs. SOFTWOODS.

Table "C" gives a comparison of the production of hardwoods and softwoods in Canada in 1913 by provinces.

The wood of all coniferous trees is classed as "softwood," irrespective of the relative hardness of the different kinds. Similarly, the wood of all the broad-leaved trees is classed as "hardwood" although the wood of some of these kinds may be softer than some of the so-called "softwoods."

TABLE C.

SOFTWOODS vs. HARDWOODS—Total Quantity and Percentage each Form of the Total Lumber Production in Canada and in Each Province.

SOFTWOODS			HARDWOODS		
Province.	Quantity.	Per Cent of Total.	Province.	Quantity.	Per Cent of Total.
	M Ft. B.M.			M Ft. B.M.	
Canada.....	3,553,928	83.1	Canada.....	263,613	6.9
British Columbia.....	1,171,178	99.8	British Columbia.....	2,469	0.2
Ontario.....	938,805	85.3	Ontario.....	162,261	14.7
Quebec.....	562,745	89.3	Quebec.....	67,601	10.7
New Brunswick.....	389,978	97.7	New Brunswick.....	9,269	2.3
Nova Scotia.....	256,115	93.2	Nova Scotia.....	18,607	6.8
Saskatchewan.....	114,769	99.9	Saskatchewan.....	31	•
Manitoba.....	69,573	96.7	Manitoba.....	2,388	3.3
Alberta.....	44,308	99.7	Alberta.....	154	0.3
Prince Edward Island.....	5,558	87.0	Prince Edward Island.....	833	13.0

\*Less than one tenth of one per cent.

As the percentage of softwoods in every province is large (in no case less than 85 per cent in 1913) the relative importance of the different provinces was about the same in the production of softwoods as in table "A", where the

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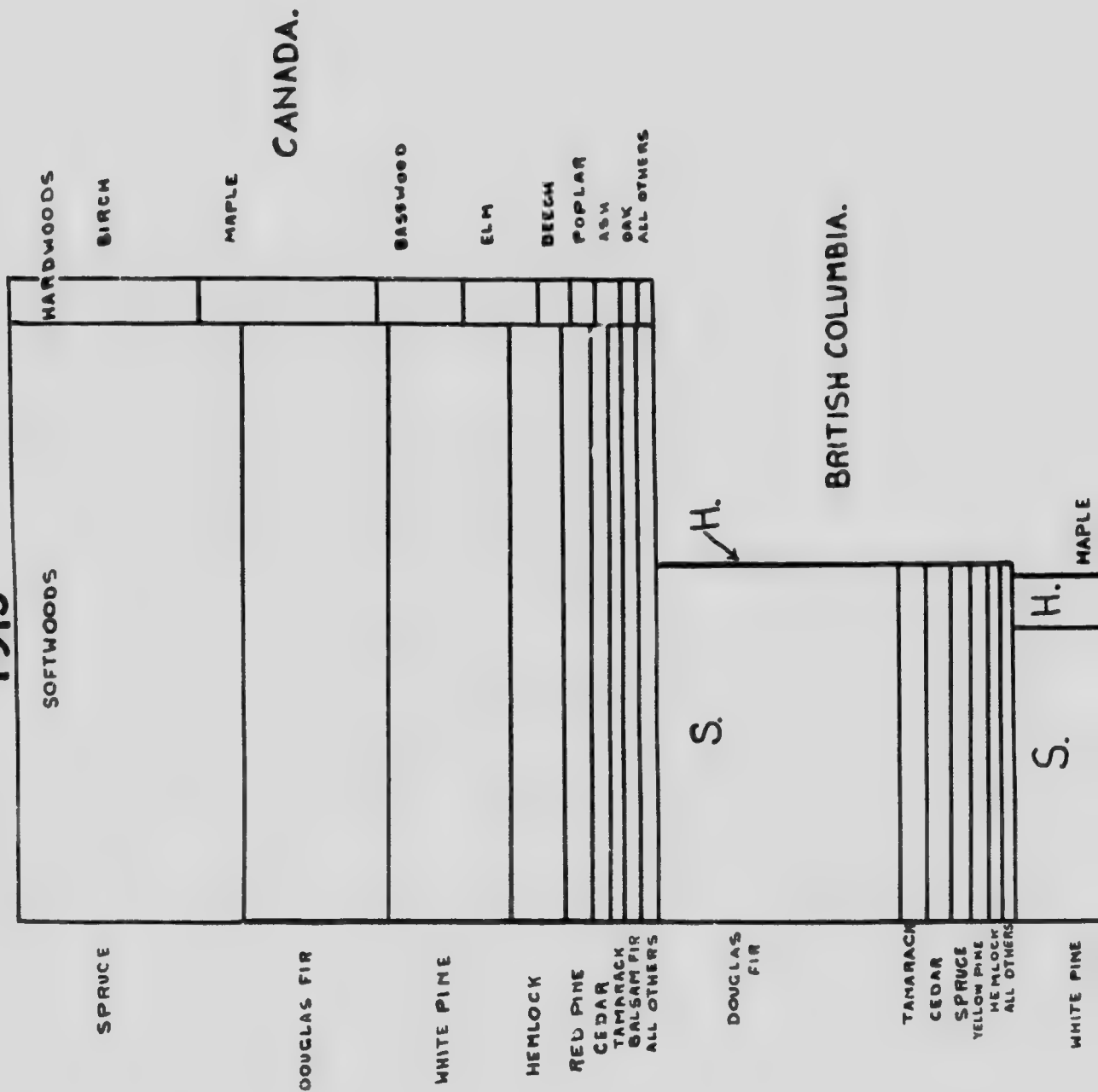
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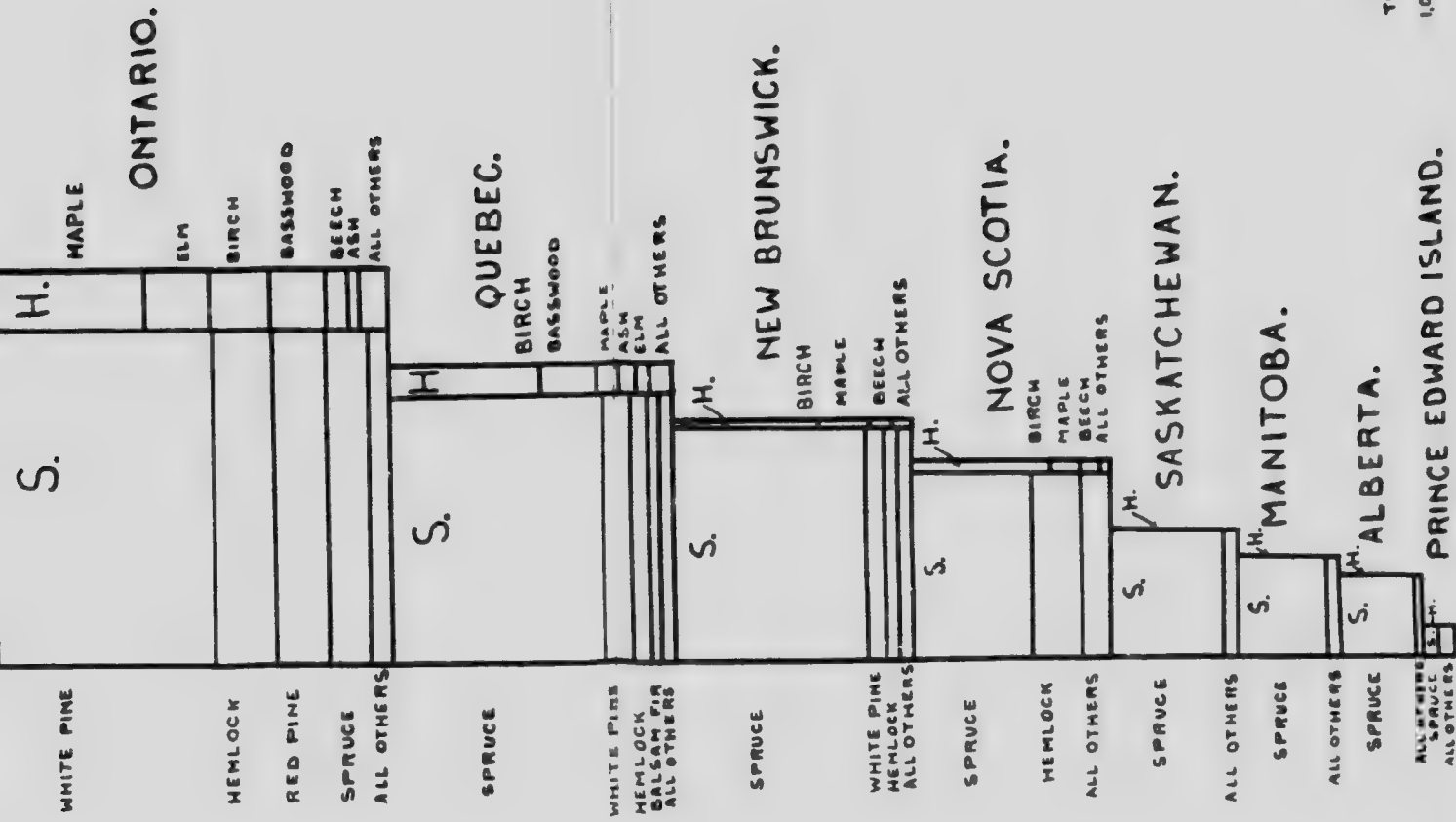
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# LUMBER PRODUCTION IN CANADA 1913







two classes of lumber are combined. With regard to the hardwoods, however, the order of importance is somewhat different. Ontario was the greatest hardwood-producing province, while British Columbia ranked next to last on the list in this respect. The hardwoods formed a higher proportion of the total production of lumber in Ontario than they did in any other province.

Table "D" gives a comparison of the production of softwoods and hardwoods in Canada in 1913 by kinds of wood.

TABLE D.

SOFTWOODS vs. HARDWOODS—Comparison of Quantities of each Produced in Canada in 1913 and Percentage each Forms of the Total Production.

SOFTWOODS.			HARDWOODS.		
Kind of Wood.	Quantity.	Per Cent of Total.	Kind of Wood.	Quantity.	Per Cent of Total.
	M Ft. B.M.			M Ft. B.M.	
<b>Total</b> .....	<b>3,453,079</b>	<b>100.0</b>	<b>Total</b> .....	<b>363,612</b>	<b>100.0</b>
Spruce.....	1,274,216	35.9	Birch.....	79,359	30.1
Douglas Fir.....	793,143	22.3	Maple.....	73,580	27.9
White Pine.....	678,330	19.1	Basswood.....	36,009	13.7
Hemlock.....	306,342	8.6	Elm.....	30,766	11.6
Red Pine.....	144,320	4.1	Beech.....	12,963	4.9
Cedar.....	101,053	2.8	Poplar.....	11,136	4.2
Tamarack.....	96,325	2.7	Ash.....	10,509	4.0
Balsam Fir.....	64,957	1.8	Oak.....	6,348	2.4
Yellow Pine.....	58,939	1.7	Chestnut.....	1,317	0.5
Jack Pine.....	35,404	1.0	All others.....	1,606	0.6

The seven most important kinds of lumber in Canada in 1913 were softwoods. Among the thirteen most important woods only three were hardwoods. Birch, maple, basswood and elm in the order named are the most important, and these together made up 83.5 per cent of the total production of hardwoods.

In table "D" under "All others" are included such woods as hickory, butternut, cherry, black gum ("pepperidge") walnut, tulip ("yellow poplar" or "whitewood"), sycamore and sassafras. These woods, as a rule, are cut only in southern Ontario or Quebec and are of little importance in the Canadian lumber market.

In this bulletin is inserted a diagram which shows graphically the details of the lumber production in Canada in 1913.

The squares represent by their area the production of lumber in the Dominion as a whole and in each province separately. The vertical dividing line in each case separates softwoods from hardwoods. In some provinces the quantity of hardwoods is so small that when it is reduced to the scale of this diagram, it occupies a space of less width than the line bounding the square.

The horizontal lines separate the different kinds of wood, whether softwood or hardwoods. The sections marked "All others" represent totals of the less important woods produced.

Each separate section in the diagram represents by its area the relative quantity of wood produced of that kind in 1913.

## LUMBER PRODUCTION BY PROVINCES.

Tables I to IX show the lumber production in each of the nine Canadian provinces, by kinds of wood.

TABLE I.

BRITISH COLUMBIA LUMBER, 1912 AND 1913, BY KINDS OF WOOD--Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Kind of Wood.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M	M		\$	\$ c.	\$ c.
Total	150	1,312,789	1,172,947	100.0	16,428,218	13.50	14.60
Douglas Fir	115	889,646	792,852	67.6	10,895,007	12.33	13.73
Tamarack	34	63,059	86,062	7.3	1,182,014	15.16	13.62
Cedar	89	125,042	82,627	7.0	1,210,276	18.61	14.65
Spruce	66	99,057	62,302	5.3	960,934	14.54	15.42
Yellow Pine	37	53,960	58,939	5.0	874,014	16.30	14.83
Hemlock	53	49,716	39,052	3.3	549,062	13.80	14.06
White Pine	23	15,543	29,783	2.5	429,224	13.54	14.41
Balsam Fir	21	13,742	15,258	1.3	227,012	15.17	14.88
Jack Pine	8	3,367	4,306	0.4	61,522	14.94	14.29
Poplar (Cottonwood)	7	646	2,381	0.2	38,069	19.85	15.99
Birch	4	1	62	•	804	12.00	12.97
Maple	2	3	26	•	280	20.00	10.77

\*Less than one tenth of one per cent.

The largest mills in Canada are located in British Columbia, where the average mill-cut was 7,381,428 feet, board measure, in 1913.

The only important change in the relative order of the species was in the case of tamarack. The production of this wood increased by 36.5 per cent from 1912 to 1913, bringing this wood up from fourth to second place on the list. Douglas fir still formed over two thirds of the production. The production of cedar lumber showed a great decrease. This wood is the most important shingle material in Canada at the present time, and its importance in this respect should not be overlooked in considering the relative importance of the wood among the other Pacific Coast species.

The most expensive softwood in British Columbia is spruce, at an average value of \$15.42. Of the entire production, 97.3 per cent was made up of coniferous woods, or softwoods.

TABLE II.

ONTARIO LUMBER, 1912 AND 1913, BY KINDS OF WOOD—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Kind of Wood.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	¢ cts.	¢ cts.
<b>Total</b> .....	<b>645</b>	<b>1,355,196</b>	<b>1,101,006</b>	<b>100.0</b>	<b>25,772,617</b>	<b>19.33</b>	<b>23.41</b>
White Pine.....	400	754,892	516,098	46.9	1,539,269	21.26	29.83
Hemlock.....	467	162,005	142,731	13.0	2,394,988	13.89	16.78
Red Pine.....	118	128,431	132,846	12.0	2,461,800	18.28	18.56
Spruce.....	322	110,626	104,485	9.5	1,597,652	16.46	15.29
Maple.....	433	62,754	61,213	5.6	1,107,384	20.03	18.09
Elm.....	453	29,178	27,305	2.5	593,553	29.98	31.75
Birch.....	290	28,336	25,665	2.3	512,005	19.23	19.95
Jack Pine.....	47	22,119	24,297	2.2	352,510	14.59	14.51
Basswood.....	462	34,794	22,867	2.1	501,959	16.81	21.95
Cedar.....	168	13,791	9,493	0.9	151,484	16.29	15.96
Beech.....	192	10,151	8,701	0.8	145,464	16.41	16.72
Ash.....	306	6,542	5,677	0.5	142,698	22.52	25.14
Oak.....	228	5,575	5,061	0.5	171,334	30.73	33.72
Balsam Fir.....	126	4,644	4,364	0.4	69,478	18.39	15.92
Tamarack.....	148	5,940	4,691	0.4	66,324	15.03	14.14
Poplar (Aspen).....	56	2,674	1,714	0.1	20,879	12.61	12.18
Chestnut.....	35	1,511	1,307	0.1	25,072	21.58	19.18
Poplar (Balsam).....	51		1,000	0.1	17,296		16.32
Hickory.....	35	661	625	0.1	23,200	31.97	37.22
Poplar (Cottonwood).....	19		500	*	5,990		11.80
Butternut.....	47	264	178	*	5,100	22.96	28.65
Cherry.....	58	218	176	*	4,635	29.77	26.34
Black Gum.....	1	43	125	*	3,000	24.00	24.00
Walnut.....	10	61	35	*	1,617	31.85	46.20
Tulip.....	3	180	20	*	358	13.17	17.90
Sycamore.....	2	2	11	*	255	22.00	23.18
Sassafras.....	1		1	*	45		45.00
Willow.....		2				24.00	
Ironwood.....		2				20.00	

\* Less than one-tenth of one per cent.

† Total for 1912 includes aspen, balsam and cottonwood poplar.

The average mill-cut in Ontario in 1913 was 1,607,396 feet as compared to 1,708,000 feet in 1912.

The first fifteen woods on the list retained their relative positions, with two exceptions. The production of basswood in Ontario in 1913 was a reduction of over a third from the cut in 1912, and this wood dropped from sixth to ninth place on the list. A reduction of over a fifth in the cut of tamarack in the province caused this wood to drop down from thirteenth to fifteenth place. The only increases to be noted are in the cases of red pine, jack pine and the poplar group, (aspen and balsam poplar and cottonwood).

The average prices reported increased, on the average, by \$4.08, the greatest increase among the more important woods being in the price of white pine and amounting to \$8.57.

Ontario cuts a greater variety of woods than any other province. Counting the poplar group (aspen and balsam poplar and cottonwood) as one kind, a total of twenty five kinds were reported. Douglas fir and yellow pine are the only Canadian woods not produced in this province.

TABLE III.

QUEBEC LUMBER, 1912 AND 1913, BY KINDS OF WOOD—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Kind of Wood.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Total</b> .....	<b>684</b>	<b>677,215</b>	<b>630,346</b>	<b>100.0</b>	<b>10,618,528</b>	<b>15.79</b>	<b>16.85</b>
Spruce.....	642	406,615	412,259	65.4	6,498,301	14.42	15.76
White Pine.....	323	85,204	72,140	11.4	1,649,202	22.85	22.86
Hemlock.....	378	42,534	38,491	6.1	543,514	13.01	14.12
Birch.....	400	50,017	34,124	5.4	645,204	16.25	18.91
Balsam Fir.....	335	24,873	20,746	3.3	304,920	14.50	14.70
Basswood.....	297	18,091	13,121	2.1	271,077	19.44	20.66
Red Pine.....	73	11,045	9,750	1.5	197,271	17.55	20.23
Maple.....	234	9,856	7,364	1.2	129,049	15.43	17.52
Cedar.....	215	12,048	6,727	1.1	105,433	13.61	15.67
Ash.....	181	5,602	4,756	0.8	89,603	18.77	18.84
Elm.....	166	3,752	3,449	0.5	59,636	16.22	17.29
Poplar (Aspen).....	103	1,650†	1,709	0.3	26,417	12.90	15.46
Beech.....	101	2,268	1,596	0.3	26,364	15.89	16.52
Tamarack.....	54	1,319	1,472	0.2	22,734	14.23	15.44
Jack Pine.....	30	844	1,160	0.2	18,561	14.57	16.00
Oak.....	62	1,043	611	0.1	15,819	26.98	25.89
Butternut.....	42	288	326	0.1	6,966	21.83	21.37
Poplar (Cottonwood).....	19	.....	238	*	3,465	.....	14.56
Poplar (Balsam).....	13	.....	200	*	2,290	.....	11.45
Cherry.....	31	133	70	*	1,536	25.52	21.94
Hickory.....	3	6	22	*	466	40.00	21.18
Chestnut.....	1	27	10	*	300	60.00	30.00
Walnut.....	1	0	5	*	400	.....	80.00

\*Less than one-tenth of one per cent.

†Total for 1912 includes aspen, balsam and cottonwood poplar.

While the number of mills in Quebec and the number in Ontario is almost the same, the average production of mills in Quebec is only 921,558 feet as compared to 1,607,396 feet in Ontario. The larger number of small neighbourhood or custom mills in Quebec cutting wood for the farmers accounts for this difference.

While a small increase was reported in the cut of the most important wood, spruce, the next ten most important woods decreased in production from 1912 to 1913. Decreases in the cut of birch and cedar caused changes in the order of importance of the first ten woods on the list, birch dropping from third to

fourth place and cedar from seventh to ninth. The hardwoods in this province form 10.8 per cent of the total production of lumber. The average price at the mill was \$1.06 more than in 1912. The first fifteen woods all showed increases in price, the greatest of which was \$2.73 in the case of red pine.

TABLE IV.

NEW BRUNSWICK LUMBER, 1912 AND 1913 BY KINDS OF WOOD—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Kind of Wood.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Total</b> .....	<b>177</b>	<b>449,738</b>	<b>399,247</b>	<b>100.0</b>	<b>5,758,849</b>	<b>13.44</b>	<b>14.43</b>
Spruce.....	164	353,066	316,703	79.3	4,618,212	13.35	14.58
White Pine.....	88	28,290	31,227	7.8	545,847	16.68	17.45
Hemlock.....	80	20,936	21,952	5.5	271,736	11.72	12.38
Balsam Fir.....	65	28,670	17,311	4.3	162,160	11.88	9.37
Birch.....	72	7,873	5,749	1.4	84,622	13.42	14.72
Cedar.....	15	5,100	2,154	0.5	19,802	17.59	9.19
Maple.....	33	2,164	1,945	0.5	27,770	14.47	14.28
Beech.....	20	1,011	838	0.2	11,850	12.96	14.14
Poplar (Aspen).....	10	567†	641	0.2	6,731	12.43	10.50
Jack Pine.....	5	708	359	0.1	4,882	11.19	13.64
Red Pine.....	16	802	201	0.1	2,959	13.17	14.72
Ash.....	5	121	32	•	866	10.78	27.06
Basswood.....	4	36	21	•	345	14.64	16.43
Poplar (Balsam).....	3	•	13	•	156	•	12.00
Tamarack.....	2	357	12	•	318	12.02	26.50
Butternut.....	1	21	12	•	240	13.62	20.00
Oak.....	2	•	11	•	241	•	21.91
Elm.....	3	16	7	•	112	11.44	16.00

\*Less than one-tenth of one per cent.

†Total for 1912 includes aspen and balsam poplar.

While only 177 mills reported from New Brunswick in 1913 these mills cut a high average quantity, namely, 2,255,633 feet of lumber. This is the highest average mill production in Eastern Canada.

The cut of white pine increased by 10.6 per cent and that of hemlock by 4.9 per cent, while that of balsam fir decreased by 39.6 per cent. This resulted in balsam fir dropping from second to fourth place on the list. Otherwise the relative order of the first eight woods remained the same as in 1912. The greatest decrease among the more important woods was in the production of cedar and amounted to 57.8 per cent. The hardwoods formed only 2.4 per cent of the production. The average price of lumber increased by \$0.98 in this province in 1913.

TABLE V.

NOVA SCOTIA LUMBER, 1912 AND 1913, BY KINDS OF WOOD—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Kind of Wood.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Total</b>	<b>322</b>	<b>312,763</b>	<b>274,722</b>	<b>100.0</b>	<b>3,649,244</b>	<b>13.77</b>	<b>13.36</b>
Spruce.....	312	200,426	156,311	56.9	2,108,770	13.89	13.49
Hemlock.....	204	57,755	63,851	23.2	742,627	12.90	11.63
White Pine.....	142	27,370	28,918	10.5	478,540	15.94	16.55
Birch.....	173	13,438	13,095	4.8	171,317	12.48	13.08
Balsam Fir.....	74	5,469	5,251	1.9	59,165	10.95	11.27
Maple.....	70	3,054	2,946	1.1	37,404	10.43	12.70
Beech.....	58	1,878	1,770	0.6	23,643	11.08	13.36
Red Pine.....	29	2,003	1,657	0.6	24,400	15.72	14.78
Oak.....	26	658	614	0.2	18,338	26.77	30.84
Poplar (Aspen).....	8	171†	95	*	1,038	11.54	10.93
Jack Pine.....	6	380	51	*	826	14.57	16.20
Cedar.....	1		50	*	600		12.00
Ash.....	5	99	42	*	1,106	20.55	26.33
Poplar (Balsam).....	3		35	*	397		11.34
Tamarack.....	4	36	26	*	273	16.11	10.50
Poplar (Cottonwood).....	1		10	*	130		13.00
Willow.....		25				12.00	
Elm.....		1				20.00	

\*Less than one-tenth of one per cent.

†Total for 1912 includes aspen, balsam and cottonwood poplar.

With the exception of Prince Edward Island the mills in Nova Scotia cut a lower average per mill than those of any other province. This average in 1913 was 853,174 feet. Custom mills and small portable mills cutting out small stands of scattered timber are very numerous in this province.

Although the production of white pine and hemlock increased from 1912 to 1913, while that of all the other woods decreased, the relative positions of the six most important woods remained the same as in 1912.

The average price of lumber decreased in this province, although the decrease amounted to only 41 cents. The price of spruce and hemlock, which form over 80 per cent of the production, decreased, while that of the majority of the remaining woods increased. The hardwoods in Nova Scotia formed 6.9 per cent of the total production of lumber in the province in 1913.

TABLE VI.

SASKATCHEWAN LUMBER, 1912 AND 1913, BY KINDS OF WOOD—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Kind of Wood.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Total</b> .....	<b>25</b>	<b>157,255</b>	<b>114,800</b>	<b>100.0</b>	<b>1,903,482</b>	<b>16 12</b>	<b>16 62</b>
Spruce.....	22	155,943	112,750	98.2	1,878,352	16 12	16 66
Tamarack.....	5	1,108	1,813	1.6	27,193	16 84	15 00
Jack Pine.....	2	204	206	0.2	2,472	12 00	12 00
Poplar (Aspen).....	3		31	*	465		15 00

\*Less than one tenth of one per cent.

The three prairie provinces, Manitoba, Saskatchewan and Alberta, are chiefly engaged in the manufacture of spruce lumber. The few other kinds reported are relatively unimportant. The average mill-cut in Saskatchewan was 4,592,000 feet coming second only to British Columbia in this respect. The four kinds of lumber reported were produced in about the same relative proportions in 1913 as in 1912. The only increase shown was in the production of tamarack. The average price increased by 50 cents, the only decrease being in the price of tamarack. Aspen poplar, the only hardwood cut in the province, formed less than a tenth of one per cent of the total.

TABLE VII.

MANITOBA LUMBER, 1912 AND 1913, BY KINDS OF WOOD—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Kind of Wood.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Total</b> .....	<b>50</b>	<b>39,535</b>	<b>71,961</b>	<b>100.0</b>	<b>946,458</b>	<b>13 79</b>	<b>13 15</b>
Spruce.....	46	36,694	64,617	89.8	858,007	13 76	13 28
Jack Pine.....	7	238	2,783	3.9	32,585	15 53	11 71
Tamarack.....	21	1,240	2,172	3.0	27,544	15 18	12 68
Poplar (Aspen).....	18	1,320†	2,066	2.9	23,681	12 80	11 46
Poplar (Balsam).....	10		268	0.4	3,210		11 98
Birch.....	4	7	27	*	771	30 00	28 56
Oak.....	5	7	26	*	624	21 71	24 00
Cedar.....	1	23	1	*	18	18 00	18 00
Elm.....	1	1	1	*	18	18 00	18 00
Balsam Fir.....		5				18 00	

\*Less than one tenth of one per cent.

†Total for 1912 includes aspen and balsam poplar.

Manitoba was the only province in Canada reporting an increase in lumber production in 1913. The mills cut, on an average, 1,439,220 feet each. The cut of every kind of wood but cedar increased, the greatest increase being with jack pine.

Some of the eastern hardwoods, such as birch, oak and elm, are reported in small quantities from eastern Manitoba, but are commercially unimportant.

TABLE VIII.

ALBERTA LUMBER, 1912 AND 1913, BY KINDS OF WOOD—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Kind of Wood.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Total</b> .....	<b>40</b>	<b>47,478</b>	<b>44,463</b>	<b>100.0</b>	<b>686,962</b>	<b>15 71</b>	<b>15 69</b>
Spruce.....	39	42,964	41,704	93.8	566,250	15 83	15 58
Jack Pine.....	17	3,705	2,237	5.0	35,407	14 69	15 83
Douglas Fir.....	2	215	291	0.7	3,971	15 00	13 65
Tamarack.....	3	112	76	0.2	1,260	17 41	16 58
Poplar (Balsam).....	3		70	0.2	965		13 79
Poplar (Aspen).....	4	477†	59	0.1	724	12 83	12 27
Birch.....	1	5	25	.	325	20 00	13 00

\*Less than one-tenth of one per cent.

†Total for 1912 includes aspen and balsam poplar.

Alberta's forty active mills cut an average of 1,111,550 feet of lumber each in 1913. Douglas fir, which is cut by only two mills on the east slope of the Rocky Mountains, showed an increase, while the other woods on the list were produced in smaller quantities than in 1912.

TABLE IX.

PRINCE EDWARD ISLAND LUMBER, 1912 AND 1913, BY KINDS OF WOOD—  
Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and  
Per Cent Distribution, 1913.

Kind of Wood.	No. of Active Mills Report- ing.	Quantity.		Per Cent Distri- bution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Total</b> .....	<b>45</b>	<b>6,771</b>	<b>6,291</b>	<b>100.0</b>	<b>85,129</b>	<b>12 78</b>	<b>13 32</b>
Spruce.....	44	3,920	3,085	48.3	40,512	13 51	16 13
Balsam Fir.....	30	1,438	2,030	31.8	23,220	12 66	11 44
Birch.....	32	590	612	9.6	9,188	14 48	15 01
Hemlock.....	19	292	265	4.1	3,842	13 10	14 50
White Pine.....	6	128	104	1.6	2,959	28 45	28 45
Maple.....	19	176	86	1.3	1,428	14 10	16 60
Beech.....	15	109	78	1.2	1,011	14 94	12 96
Red Pine.....	3	13	66	1.0	1,980	25 00	30 00
Poplar (Aspen).....	3	18†	43	0.7	513	21 00	11 93
Jack Pine.....	1	40	6	0.1	75	12 50	12 50
Oak.....	1		5	0.1	200		40 00
Elm.....	1	1	4	0.1	80	18 00	20 00
Poplar (Balsam).....	2		3	*	50		16 67
Ash.....	1	22	2	*	30	13 64	15 00
Tamarack.....	1	6	1	*	12	20 00	12 00
Cedar.....	1	18	1	*	20	20 00	20 00

\*Less than one tenth of one per cent.

†Total for 1912 includes aspen and balsam poplar.

The smallest province in Canada has also the smallest average mill-production of 142,022 feet. The timber in Prince Edward Island occurs only in small isolated stands, many of which are merely farmer's woodlots. This material is sawn almost entirely by small neighborhood or custom mills. The hardwoods in this province formed 13.1 per cent of the total in 1913; this province is exceeded only by Ontario in this respect.

#### LUMBER PRODUCTION BY KINDS OF WOOD.

Tables 1 to 18 show the details of the production of lumber by kinds of wood in the different provinces of Canada in 1912 and 1913.

Under "Commercial species included" are given the accepted common name and the botanical name (in *italic*) of each species that goes to make up the total. Rare and commercially unimportant species are not mentioned. Following the botanical name is a list of abbreviations representing the provinces in which that particular species is cut; where the abbreviation is enclosed in brackets, the species rarely occurs or is of little commercial importance in the province.

#### SPRUCE.

Commercial species included:—

White spruce (*Picea canadensis*)—All provinces.

Red spruce (*Picea rubra*)—P.E.I., N.S., N.B., Que., (Ont.).

Black spruce (*Picea mariana*)—All provinces.

Engelmann spruce (*Picea Engelmanni*)—B.C., Alta.

Sitka spruce (*Picea sitchensis*)—"

TABLE 1.

SPRUCE LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ c.	\$ c.
<b>Canada</b> .....	<b>1,686</b>	<b>1,469,311</b>	<b>1,274,216</b>	<b>100.0</b>	<b>19,126,990</b>	<b>14 46</b>	<b>15 01</b>
Quebec.....	642	406,615	412,259	32.4	6,498,301	14 42	15 76
New Brunswick.....	164	353,066	316,703	24.9	4,618,212	13 35	14 58
Nova Scotia.....	312	200,426	156,311	12.3	2,108,770	13 89	13 49
Saskatchewan.....	22	155,943	112,750	8.8	1,878,352	16 12	16 66
Ontario.....	321	110,626	104,485	8.2	1,597,652	16 46	15 29
Manitoba.....	46	36,694	64,617	5.1	858,007	13 76	13 28
British Columbia.....	66	99,057	62,302	4.8	960,934	14 54	15 42
Alberta.....	39	42,964	41,704	3.3	566,250	15 83	13 58
Prince Edward Island.....	44	3,920	3,085	0.2	40,512	13 51	13 13

White spruce probably forms the greatest part of the spruce cut in Canada, as this tree is abundant in every province but British Columbia, and its range in this province is not definitely known. A small quantity cut in the Yukon Territory is included in the total for British Columbia. It is the most important spruce in Quebec, Ontario and the three prairie provinces. Red spruce is the important species in the Maritime Provinces and southeastern Quebec. It is found only to a very limited extent in Ontario and does not occur west of this province. Black spruce has a wider range than white spruce and is found further south in British Columbia, although it is of less commercial importance than any of the spruces. The tree is largely confined to low swampy situations and seldom reaches saw-timber size. The important spruces in British Columbia are Engelmann and Sitka spruce. Engelmann spruce is a Rocky Mountain species and is cut in some Alberta mills. Sitka spruce is confined to the coast region of British Columbia. The production of Engelmann spruce in British Columbia in 1913 was about 32,795,000 feet, board measure, valued at \$15.11 a thousand. The production of Sitka spruce was 28,396,000 feet, valued at \$15.34 per thousand.

## DOUGLAS FIR.

Commercial species included:—

Douglas fir (*Pseudotsuga mucronata*)—B.C., (Alta.).

TABLE 2.

DOUGLAS FIR LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada</b> .....	<b>117</b>	<b>889,861</b>	<b>793,143</b>	<b>100.0</b>	<b>10,898,978</b>	<b>12.33</b>	<b>13.74</b>
British Columbia.....	115	889,646	792,852	99.96	10,895,007	12.33	13.74
Alberta.....	2	215	291	0.04	3,971	15.00	13.65

Douglas fir is cut in Canada in larger quantities than any other single species. Timbers of this wood can be obtained in larger dimensions than of any other Canadian species. The tree has been unfortunately misnamed, as it is not a fir (*Abies*) but belongs to a distinct genus of which there are no other species in Canada. The wood is sold under many erroneous names, two of the commonest being "Douglas spruce" and "Oregon pine", which have resulted from attempts made to classify it with the woods of the east. "Yellow" and "red" fir are names caused by differences in growth and do not refer to different species of this wood. The northern range of this tree in British Columbia is imperfectly known. It crosses the Rocky Mountains and is cut in small quantities in Alberta. The largest trees, producing the finest lumber, are cut in the Puget Sound district of the Coast Region.

## WHITE PINE.

Commercial species included:—

White pine (*Pinus strobus*)—P.E.I., N.S., N.B., Que., Ont., (Man.).

Western white pine (*Pinus monticola*)—B.C.

TABLE 3.

WHITE PINE LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
Canada.....	982	911,427	678,330	100.0	16,502,041	20.96	27.29
Ontario.....	400	754,892	516,098	76.1	15,396,269	21.26	29.83
Quebec.....	323	85,204	72,140	10.6	1,649,202	22.85	22.86
New Brunswick.....	88	28,290	31,287	4.6	545,847	16.68	17.45
British Columbia.....	23	15,543	29,783	4.4	429,224	13.54	14.41
Nova Scotia.....	142	27,370	28,918	4.3	478,540	15.94	16.55
Prince Edward Island.....	6	128	104	*	2,959	28.45	28.45

\*Less than one tenth of one per cent.

White pine is cut from one species only in Eastern Canada. The tree grows throughout the Maritime Provinces and in Ontario and Quebec south of the height of land between the St. Lawrence and Hudson Bay. It just reaches southeastern Manitoba, and has been cut in small quantities in that province. The western species is confined to British Columbia and is a smaller tree than the eastern. It seldom occurs in pure stands and is not at present of great commercial importance.

## HEMLOCK.

Commercial species included:—

Eastern hemlock (*Tsuga canadensis*)—P.E.I., N.S., N.B., Que., Ont.

Western hemlock (*Tsuga heterophylla*)—B.C.

TABLE 4.

HEMLOCK LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada.....</b>	<b>1,198</b>	<b>332,238</b>	<b>306,342</b>	<b>100.0</b>	<b>4,565,767</b>	<b>13.45</b>	<b>14.71</b>
Ontario.....	467	162,005	142,731	46.6	2,394,986	13.89	16.78
Nova Scotia.....	204	57,755	63,851	20.8	742,627	12.90	11.63
British Columbia.....	53	49,716	39,052	12.7	549,062	13.80	14.06
Quebec.....	378	42,534	38,491	12.6	543,514	13.01	14.12
New Brunswick.....	80	20,936	21,952	7.2	271,736	11.72	12.38
Prince Edward Island.....	16	292	265	0.1	3,842	13.10	14.59

Eastern hemlock is found in Canada throughout the same range as white pine, not extending, however, as far north or as far west as pine. The wood is important chiefly on account of its cheapness and abundance. The western species, which is cut only in British Columbia, is a much more valuable wood and has none of the objectionable qualities of the eastern species.

## RED PINE.

Commercial species included:—

Red or Norway pine (*Pinus resinosa*)—P.E.I., N.S., N.B., Que., Ont., (Man.).

TABLE 5.

RED PINE LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada.....</b>	<b>239</b>	<b>142,294</b>	<b>144,320</b>	<b>100.0</b>	<b>2,688,653</b>	<b>18.16</b>	<b>18.63</b>
Ontario.....	118	128,431	132,646	91.9	2,461,800	18.28	18.56
Quebec.....	73	11,045	9,750	6.8	197,271	17.55	20.23
Nova Scotia.....	29	2,003	1,657	1.2	24,490	15.72	14.78
New Brunswick.....	16	802	201	0.1	2,959	13.17	14.72
Prince Edward Island.....	3	13	66	0.	1,980	25.00	30.00

\*Less than one tenth of one per cent.

Red or Norway pine is a similar wood to white pine, but is usually harder and stronger and contains more resin. Many sawmills do not distinguish between the two species and therefore some of the lumber attributed to white pine in Table 3 is probably red or Norway pine. This tree has the same distribution as white pine, but is often found further north.

## CEDAR.

Commercial species included:—

White cedar (*Thuja occidentalis*)—P.E.I., N.S., N.B., Que., Ont., (Man.).

Western red cedar (*Thuja plicata*)—B.C.

TABLE 6.

CEDAR LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent. Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913	1912.	1913.
		M Ft. B. M.	M Ft. B. M.		\$	\$ cts.	\$ cts.
<b>Canada.....</b>	<b>489</b>	<b>156,022</b>	<b>101,053</b>	<b>100.0</b>	<b>1,487,633</b>	<b>17.98</b>	<b>14.72</b>
British Columbia.....	88	125,042	82,627	81.8	1,210,276	18.61	14.65
Ontario.....	168	13,791	9,493	9.4	151,484	16.20	15.96
Quebec.....	215	12,048	6,727	6.7	105,433	13.61	15.67
New Brunswick.....	15	5,100	2,154	2.1	19,802	17.59	9.19
Nova Scotia.....	1		50	*	600		12.00
Prince Edward Island.....	1	18	1	*	20	20.00	20.00
Manitoba.....	1	23	1	*	18	18.00	18.00

\*Less than one tenth of one per cent.

While eastern cedar is quite common in New Brunswick, it is almost a curiosity in Nova Scotia. It is cut in greatest quantities in Ontario and Quebec, where it grows as far north as James Bay. The tree occurs in small isolated stands around Lake Winnipeg, but is comparatively rare in Manitoba and is entirely absent from the forests of Saskatchewan and Alberta. The western species is a much larger tree, usually with an enormously enlarged or buttressed base; it is one of the most important shingle woods of Canada, as it provides larger shingle bolts free from defects than the eastern species. The western species is found in Canada only in British Columbia, but extends to the north along the Coast into Alaska.

## TAMARACK.

Commercial species included:—

Tamarack (*Larix laricina*)—All provinces.

Western larch (*Larix occidentalis*)—B.C.

TABLE 7.

TAMARACK LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province,	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B. M.	M Ft. B. M.		\$	\$ cts.	\$ cts.
<b>Canada</b> .....	<b>373</b>	<b>73,177</b>	<b>96,325</b>	<b>100.0</b>	<b>1,327,672</b>	<b>18.11</b>	<b>13.77</b>
British Columbia.....	34	63,059	86,062	89.3	1,192,014	15.16	13.73
Ontario.....	148	5,940	4,691	4.9	66,324	15.03	14.14
Manitoba.....	21	1,240	2,172	2.3	27,544	15.18	12.68
Saskatchewan.....	5	1,106	1,813	1.9	27,193	16.84	15.00
Quebec.....	54	1,310	1,472	1.5	22,734	14.23	15.44
Alberta.....	3	112	76	0.1	1,260	17.41	16.58
Nova Scotia.....	4	36	26	•	273	16.11	10.50
New Brunswick.....	2	357	12	•	318	12.00	26.50
Prince Edward Island.....	1	6	1	•	12	20.00	12.00

\*Less than one tenth of one per cent.

Tamarack grows as far north as any tree species in America, reaching, with black and white spruce, the limits of tree-growth. The species forms a large percentage of the forest of interior Labrador, and extends to the mouth of the Mackenzie River and through the Yukon Territory to interior Alaska. In the southern part of its range the tree reaches commercial size, but to the north it is confined to sphagnum swamps or muskegs and is of no commercial importance as lumber.

Western larch is a much larger tree and is found only in British Columbia. An alpine species (*Larix Lyalli*) is found through the Rocky Mountains and the mountains of interior British Columbia, but it seldom occurs below 6,000 ft., and is of no commercial importance as lumber.

#### BIRCH.

Commercial species included:—

Yellow birch (*Betula lutea*)—P.E.I., N.S., N.B., Que., Ont.

Sweet birch (*Betula lenta*)—N.S., N.B., Que., Ont.

Paper birch (*Betula alba* var. *papyrifera*)—All provinces.

Western birch (*Betula occidentalis*)—B.C.

TABLE 8.

BIRCH LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
Canada .....	578	100,367	79,350	100.0	1,424,236	16.36	17.95
Quebec.....	400	50,017	34,124	43.0	645,204	16.25	18.91
Ontario.....	290	28,336	25,665	22.3	512,005	19.23	19.95
Nova Scotia.....	173	13,438	13,095	16.5	171,317	12.48	13.08
New Brunswick.....	72	7,873	5,749	7.3	84,622	13.42	14.72
Prince Edward Island.....	32	590	612	0.8	9,188	14.48	15.01
British Columbia.....	4	1	62	0.1	804	12.00	12.97
Manitoba.....	4	7	27	•	771	30.00	28.56
Alberta.....	1	5	25	•	325	20.00	13.00

\*Less than one tenth of one per cent.

The cut of birch, (Canada's most important hardwood) is made up of the wood of some seven species, three of which are of no commercial importance. Yellow birch is the most important commercially in point of quantity produced, and its wood is probably the most valuable. The tree grows as far north as Lake Abitibi and extends westward about halfway along the north shore of Lake Superior.

Sweet birch (*Betula lenta*) is common in the Eastern United States. Its range in Canada is imperfectly understood. Many of the so-called sweet birch logs are cut from mature trees of yellow birch, which closely resembles this species. The tree is not commercially important in Canada. Paper birch is a much inferior tree to the two preceding species, but has a much more extensive range. It does not, as a rule, reach very large dimensions, and is not important as a lumber-producing tree at the present time. Western birch grows only in British Columbia and while comparatively rare it reaches larger dimensions and produces more clear lumber to the tree than any other birch in America.

#### MAPLE.

Commercial species included:—

- Sugar maple (*Acer saccharum*)—P.E.I., N.S., N.B., Que., Ont.
- Silver maple (*Acer saccharinum*)—P.E.I., N.S., N.B., Que., Ont.
- Red maple (*Acer rubrum*)—P.E.I., N.S., N.B., Que., Ont.
- Broad-leaved maple (*Acer macrophyllum*)—B.C.

TABLE 9.

MAPLE LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution 1913.

Province	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M. Ft. B.S.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
Canada	791	77,837	73,590	100.0	1,303,315	18 91	17 71
Ontario	433	62,574	61,213	83.2	1,107,384	20 03	18 09
Quebec	234	9,856	7,364	10.0	139,049	15 43	17 52
Nova Scotia	70	3,056	2,946	4.0	37,404	10 43	12 70
New Brunswick	33	2,164	1,945	2.7	27,770	14 47	14 28
Prince Edward Island	19	176	86	0.1	1,428	14 10	16 60
British Columbia	2	3	26	0.	280	20 00	10 77

\*Less than one tenth of one per cent.

There are six or eight species of maple that reach tree size in Canada, but only the four mentioned above can be properly considered as commercially important as lumber-producing trees.

Sugar maple is the most important as to both quantity and quality of lumber produced, and this tree probably provides the greater part of the maple lumber sold. The two soft maples, silver maple and red maple, are inferior in quality and are nowhere as abundant as sugar, or hard, maple. These three trees are cut only in Eastern Canada and are not found west of Ontario. Sugar maple is found in the same range as yellow birch and has the most extensive range of any of the maples. Silver and red maple, usually sold as "soft maple," produce inferior lumber and their range does not extend as far north.

Broad-leaved maple is cut only in limited quantities in British Columbia.

#### BALSAM FIR.

Commercial species included:—

Balsam fir (*Abies balsamea*)—All provinces but B.C.

Mountain fir (*Abies lasiocarpa*)—B.C., Alta.

Amabilis fir (*Abies amabilis*)—B.C. (Coast Region).

Lowland fir (*Abies grandis*)—B.C. (Coast Region).

TABLE 10.

BALSAM FIR LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada</b> .....	<b>651</b>	<b>78,841</b>	<b>61,957</b>	<b>100.0</b>	<b>843,933</b>	<b>13.63</b>	<b>13.02</b>
New Brunswick.....	65	28,670	17,311	26.7	162,160	11.88	9.37
Quebec.....	325	24,873	20,746	31.9	304,920	14.50	14.70
British Columbia.....	21	13,742	15,255	23.5	227,012	15.17	14.88
Nova Scotia.....	74	5,469	5,251	8.1	59,165	10.95	11.27
Ontario.....	126	4,644	4,364	6.7	69,478	18.39	15.92
Prince Edward Island.....	30	1,438	2,030	3.1	23,220	12.66	11.44
Manitoba.....		8		.		18.00	

\*Less than one tenth of one per

All the balsam fir cut in Canada except in British Columbia is of one species, and this therefore forms over three quarters of the total production. The British Columbia cut is made up chiefly of mountain fir, which is sawn in the mills in the interior, and smaller quantities of amabilis fir from the coast. Some lowland fir is cut on Vancouver Island.

## YELLOW PINE.

Commercial species included:—

Western yellow, or bull, pine (*Pinus ponderosa*)—B.C.

TABLE 11.

YELLOW PINE LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada</b> .....	<b>37</b>	<b>53,960</b>	<b>58,939</b>	<b>100.0</b>	<b>874,014</b>	<b>16.30</b>	<b>14.83</b>
British Columbia.....	37	53,960	58,939	100.0	874,014	16.30	14.83

Western yellow pine is the most important timber tree over a large area of interior British Columbia, and is one of the few species which reach timber size in the Dry Belt. It is not found east of the Columbia-Kootenay Valley.

## BASSWOOD.

Commercial species included:—

Basswood (*Tilia americana*)—P.E.I., N.S., N.B., Que., Ont.

TABLE 12.

BASSWOOD LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
Canada.....	763	52,921	26,009	100.0	773,381	17 71	21 46
Ontario.....	462	34,794	22,867	63.5	501,950	16 81	21 95
Quebec.....	297	18,091	13,121	36.4	271,077	19 44	20 66
New Brunswick.....	4	36	21	0.1	345	11 64	16 43

There is only one species of basswood in Canada, although five others are found in the United States. The tree is commercially important only in southern Ontario and Quebec, being sawn only occasionally in the Maritime Provinces.

## JACK PINE.

Commercial species included:—

Jack pine (*Pinus Banksiana*)—All provinces east of B.C.Lodgepole pine (*Pinus Murrayana*)—Alta., B.C.

TABLE 13.

JACK PINE LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
Canada.....	123	31,605	35,401	100.0	568,840	14 55	14 37
Ontario.....	47	22,119	24,297	68.6	352,510	14 59	14 51
British Columbia.....	8	3,367	4,306	12.2	61,522	14 94	14 29
Manitoba.....	7	238	2,783	7.9	32,585	15 53	11 71
Alberta.....	17	3,705	2,237	6.3	35,407	14 69	15 83
Quebec.....	30	614	1,160	3.3	18,561	14 57	16 00
New Brunswick.....	5	708	358	1.0	4,882	11 10	13 64
Saskatchewan.....	2	204	206	0.6	2,472	12 00	12 00
Nova Scotia.....	6	350	51	0.1	826	14 57	16 20
P. E. Island.....	1	40	6	•	75	12 50	12 50

\*Less than one tenth of one per cent.

Jack pine is cut in every province in Canada east of the Rocky Mountains, and probably produced about 30,000,000 feet of lumber in 1913. The tree is cut in Alberta as far north as lumbering operations are carried on; in this province, however, it meets the eastern limit of lodgepole pine, the "jack pine" of the Pacific slopes. The two trees occur together in the foothills of the Rockies and in northern Alberta, and are usually not separated by lumbermen. Lodgepole pine extends down the east slope to the prairie line, and a small isolated stand exists in the so-called "Cypress Hills". In the Rocky Mountains and the mountains of Interior British Columbia, the tree is of considerable importance on account of the large areas on which it is practically the only species. On the Coast, the tree is gradually reduced in size to a prostrate shrub in situations exposed to the salt winds. It is often called "shore" pine on the Coast and is sometimes considered as a separate variety. The total cut of lodgepole pine in Canada would be in the neighborhood of 5,000,000 feet. Pitch pine (*Pinus rigida*) occurs in the Eastern Provinces but is a scrubby tree of no importance for saw-timber.

## ELM.

Commercial species included:—

White elm (*Ulmus americana*)—P.E.I., N.S., N.B., Que., Ont., (Man., Sask.).

Rock elm (*Ulmus racemosa*)—Ont., Que.

Red elm (*Ulmus fulva*)—Ont., Que.

TABLE 14.

ELM LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Report- ing.	Quantity.		Per Cent Distri- bution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada</b> .....	<b>624</b>	<b>32,919</b>	<b>30,766</b>	<b>100.0</b>	<b>653,699</b>	<b>20.44</b>	<b>21.25</b>
Ontario.....	453	29,178	27,305	88.8	593,853	20.98	21.75
Quebec.....	166	3,752	3,449	11.2	59,636	16.22	17.29
New Brunswick.....	3	16	7	*	112	11.44	16.00
P. E. Island.....	1	1	4	*	80	20.00	20.00
Manitoba.....	1	1	1	*	18	18.00	18.00
Nova Scotia.....		1				20.00	

\*Less than one tenth of one per cent.

White elm lumber is sawn in greatest quantities in Quebec and Ontario, although small quantities are produced in the Maritime Provinces and Manitoba. The tree is found occasionally in Saskatchewan and Alberta, but is rare and unimportant. This wood probably forms ninety per cent of the elm lumber sawn in Canada. Rock elm and red, or slippery, elm are limited to the St. Lawrence Valley and the shores of Lakes Erie and Ontario, and are not abundant even within this range. Rock elm, being the more valuable species, is probably cut in greater quantities than slippery elm, whose wood is inferior.

## BEECH.

Commercial species included:—

Beech (*Fagus grandifolia*)—P.E.I., N.S., N.B., Que., Ont.

TABLE 15.

BEECH LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Per M Ft.	Value B.M.
		1912.	1913.				
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada.....</b>	<b>386</b>	<b>15,417</b>	<b>12,863</b>	<b>100.0</b>	<b>208,333</b>	<b>15 45</b>	<b>16 00</b>
Ontario.....	192	10,151	8,701	67.0	145,464	16 41	16 70
Nova Scotia.....	58	1,878	1,770	13.6	23,643	11 08	13 30
Quebec.....	101	2,268	1,596	12.3	26,364	15 89	16 50
New Brunswick.....	20	1,011	838	6.5	11,850	12 96	14 14
P. E. Island.....	15	109	78	0.6	1,011	14 94	12 90

There is only one species of beech in Canada and in fact only one in America. The lumber is cut in the eastern provinces only, and is found in Canada in the Maritime Provinces and in the lower parts of the St. Lawrence basin, not occurring west of Sault Ste. Marie.

## POPLAR.

Commercial species included:—

Aspen (*Populus tremuloides*)—All provinces.

Balsam poplar (*Populus balsamifera*)—All provinces.

Cottonwood (*Populus deltoides et al. sp.*)—Que., Ont., (Man., Sask. Alta.)

Cottonwood, Black (*Populus trichocarpa*)—B.C.

TABLE 16.

POPLAR LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft.	Value B.M.
		1912.	1913.				
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada.....</b>	<b>336</b>	<b>7,523</b>	<b>11,136</b>	<b>100.0</b>	<b>152,376</b>	<b>13 50</b>	<b>13 68</b>
Ontario.....	126	2,674	3,274	29.4	44,075	12 61	13 46
British Columbia.....	7	646	2,381	21.4	38,069	19 85	15 99
Manitoba.....	28	1,320	2,334	20.9	26,891	12 80	11 52
Quebec.....	135	1,650	2,147	19.3	32,172	12 90	14 95
New Brunswick.....	13	567	634	5.9	6,887	12 43	10 53
Nova Scotia.....	12	171	140	1.2	1,565	11 54	11 18
Alberta.....	7	477	129	1.2	1,689	12 38	13 09
Prince Edward Island.....	5	18	46	0.4	563	21 00	12 24
Saskatchewan.....	3		31	0.3	465		15 00

The poplar species are among the most widely distributed trees in America. Table 16 gives the combined figures for the four commercial species which are described separately in the following three tables. In addition to these four species small quantities of large-toothed aspen and lance-leaved cottonwood may be included, but these are of no commercial importance.

TABLE 16A.

POPLAR (ASPEN) LUMBER, 1913, BY PROVINCES—Quantity Cut, Total Value, Average Value, and Per Cent Distribution.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada.....</b>	<b>205</b>	<b>†</b>	<b>6,358</b>	<b>100.0</b>	<b>80,448</b>	<b>†</b>	<b>12.65</b>
Manitoba.....	18		2,066	32.5	23,681		11.46
Ontario.....	56		1,714	26.9	20,879		12.18
Quebec.....	103		1,709	26.9	26,417		15.46
New Brunswick.....	10		641	10.1	6,731		10.50
Nova Scotia.....	8		95	1.5	1,038		10.93
Alberta.....	4		59	0.9	724		12.27
Prince Edward Island.....	3		43	0.7	513		11.93
Saskatchewan.....	3		31	0.5	465		15.00

†Not separated from "Poplar" in 1912.

Aspen poplar is not considered to be the best lumber species among the poplars, but in Canada it is found free of defect in larger quantities than any of the others, and is more frequently cut into lumber. The wood is sawn in every province but British Columbia, where it occurs. It is not utilized on account of the presence of a more valuable species.

TABLE 16B.

COTTONWOOD (POPLAR) LUMBER, 1913, BY PROVINCES—Quantity Cut, Total Value, Average Value, and Per Cent Distribution.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.			1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada.....</b>	<b>45</b>	<b>†</b>	<b>3,119</b>	<b>100.0</b>	<b>47,431</b>	<b>†</b>	<b>15.21</b>
British Columbia.....	7		2,381	76.4	38,069		15.99
Ontario.....	19		500	16.0	5,900		11.80
Quebec.....	19		238	7.6	3,465		14.56

†Not separated from "Poplar" in 1912.

Cottonwood in Canada is cut from two species, and is considered to be the most valuable poplar lumber. That produced in British Columbia is all black cottonwood (*Populus trichocarpa*), while that in the eastern provinces is common cottonwood (*Populus deltoides*), which is rare in comparison to the other species.

TABLE 16C.

POPLAR (BALSAM OR BALM) LUMBER, 1913, BY PROVINCES—Quantity Cut, Total Value, Average Value, and Per Cent Distribution.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada.....</b>	<b>86</b>	<b>†</b>	<b>1,659</b>	<b>100.0</b>	<b>24,494</b>	<b>†</b>	<b>14.78</b>
Ontario.....	51		1,060	63.9	17,296		16.32
Manitoba.....	10		268	16.1	3,210		11.98
Quebec.....	13		200	12.1	2,290		11.45
Alberta.....	3		70	4.2	965		13.79
Nova Scotia.....	4		45	2.7	527		11.71
New Brunswick.....	3		13	0.8	156		12.00
Prince Edward Island.....	2		3	0.2	50		16.66

†Not separated from "Poplar" in 1912.

Balsam poplar is usually considered to produce better lumber than aspen, but as the tree is more liable to fungus injury its lumber is difficult to obtain free of defect and it is consequently not utilized to such an extent as the other poplar species. The tree covers approximately the same range in Canada as aspen poplar.

## ASH.

Commercial species included:—

White ash (*Fraxinus americana*)—All provinces east of Manitoba.

Black Ash (*Fraxinus nigra*)—P.E.I., N.S., N.B., Que., Ont., (Man.).

TABLE 17.

ASH LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.	1913.	1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada.....</b>	<b>498</b>	<b>12,336</b>	<b>10,500</b>	<b>100.0</b>	<b>234,303</b>	<b>20.68</b>	<b>22.30</b>
Ontario.....	306	6,542	5,677	54.0	142,698	22.52	25.14
Quebec.....	181	5,602	4,756	45.3	89,603	18.77	18.84
Nova Scotia.....	5	99	42	0.4	1,106	5.55	26.33
New Brunswick.....	5	121	32	0.3	866	10.78	27.06
Prince Edward Island.....	1	22	2	0	30	13.64	15.00

\*Less than one-tenth of one per cent.

White ash lumber is produced in Canada, south of a line extending from Gaspe, Quebec, to Sault Ste. Marie, Ontario. It is the most valuable of the ash species and forms the greatest part of the production. Black ash lumber is usually considered less valuable than white, except for decorative work. The lumber is cut in Canada from Anticosti Island to Lake Winnipeg. The tree is a swamp species, and does not usually produce lumber of as large dimensions as white ash. Red ash (*Fraxinus pennsylvanica*) is cut only occasionally in southern Ontario. Green ash, a variety of red ash (var. *lanceolata*) is found in southern Ontario and southern Manitoba and Saskatchewan, but is not a lumber-producing tree.

## OAK.

Commercial species included:—

White Oak (*Quercus alba*)—Que., Ont.

Red oak (*Quercus rubra*)—P.E.I., N.S., N.B., Que., Ont.

Black oak (*Quercus velutina*)—Ont.

Scrub oak (*Quercus macrocarpa*)—N.B., N.S., Que., Ont., Man.

TABLE 18

OAK LUMBER, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	No. of Active Mills Reporting.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M Ft. B.M.	
		1912.	1913.		1913.	1912.	1913.
		M Ft. B.M.	M Ft. B.M.		\$	\$ cts.	\$ cts.
<b>Canada</b> .....	<b>324</b>	<b>7,283</b>	<b>6,348</b>	<b>100.0</b>	<b>207,156</b>	<b>29.82</b>	<b>32.63</b>
Ontario.....	228	5,575	5,081	80.0	171,334	30.73	33.72
Nova Scotia.....	26	658	614	9.7	18,938	26.77	30.84
Quebec.....	62	1,043	611	9.6	15,819	26.98	25.89
Manitoba.....	5	7	26	0.4	624	21.71	24.00
New Brunswick.....	2		11	0.2	241		21.91
Prince Edward Island.....	1		5	0.1	200		40.00

Probably more red oak lumber is produced in Canada in an average year than that of any other oak species. The supply of white oak, the most valuable species, is rapidly disappearing, and is confined to the Upper St. Lawrence valley and "Old" Ontario. Red oak covers a wider range, including the Maritime Provinces, and usually extends farther north than white oak. Black oak is cut only occasionally in southern Ontario. Scrub oak is the only species of oak in Manitoba. It is sawn into lumber in that province, but is not of great commercial importance. Garry oak (*Quercus Garryana*) is found on the Pacific Coast, but is not a timber tree. Chestnut oak (*Quercus acuminata*) swamp white oak (*Quercus platanooides*) and Scarlet Oak (*Quercus coccinea*) may be occasionally sawn into lumber in southern Ontario, but are too rare to form an important part of the supply.

## MINOR SPECIES.

The nine kinds of wood mentioned in Table 19 are cut in small quantities in Canada and vary greatly from year to year both in quantity and value. These woods are cut locally by custom mills and often for special purposes, and their variations have practically no effect on the general production of lumber in the country.

TABLE 19.

LUMBER CUT FROM MINOR SPECIES, 1913—Quantity Cut, Total Value and Average Value.

Kind of Wood.	No. of Active Mills Reporting.	Quantity.	Value.	Average Value.	Cut by Provinces.		
					Ont.	Que.	N.B.
		M Ft. B.M.	\$	\$ cts.	M Ft. B.M.	M Ft. B.M.	M Ft. B.M.
Chestnut.....	36	1,317	25,372	19.26	1,307	10	
Hickory.....	38	647	23,726	36.67	625	22	
Butternut.....	90	513	12,306	23.85	178	326	1
Cherry.....	89	246	6,171	25.09	176	70	
Black Gum.....	1	125	3,000	24.00	125		
Walnut.....	11	40	2,017	50.42	35	5	
Tulip.....	3	20	358	17.90	20		
Sycamore.....	2	11	255	23.18	11		
Sassafras.....	1	1	45	45.00	1		

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## LATH.

Table 20 gives the details of the production of lath in Canada in 1912 and 1913 by provinces.

Value and

TABLE 20.

LATH CUT, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	Quantity.		Per Cent	Total	Average Value	
	1912.	1913.	Distrib.	Value.	Per M	
	M	M	1913.	1913.	1912.	1913.
				\$	\$ cts.	\$ cts.
<b>Canada</b> .....	<b>899,016</b>	<b>739,678</b>	<b>100.0</b>	<b>1,783,283</b>	<b>2.30</b>	<b>2.41</b>
Ontario.....	303,058	262,869	35.5	710,808	2.62	2.70
New Brunswick.....	223,426	198,555	26.8	485,790	2.10	2.45
British Columbia.....	124,459	108,859	14.7	163,688	1.61	1.50
Quebec.....	117,102	90,231	12.2	225,277	2.49	2.50
Nova Scotia.....	82,311	53,448	7.2	128,339	2.21	2.40
Saskatchewan.....	42,531	31,150	2.9	58,893	2.58	2.78
Alberta.....	1,801	24,516	0.6	10,400	3.01	2.30
Manitoba.....	1,418	50	.	88	1.66	1.76
Prince Edward Island.....	2,910				2.47	

\*Less than one-tenth of one per cent.

The decrease in lath production in Canada from 1912 to 1913 was 17.7 per cent as compared to 6.9 per cent from 1911 to 1912. Laths are usually a by-product to the lumber industry, inasmuch that they are almost invariably made from slabs, edgings and other material that would otherwise be burned as waste in the sawmills. Changes from year to year in the production of lath follow those in lumber production very closely.

Saw mills in Ontario are able to employ a closer utilization of their material than those in British Columbia, and consequently produce more lath, although the British Columbia mills produced more lumber in 1913.

Table 21 gives the details of the production of lath in 1912 and 1913 by kinds of wood.

TABLE 21.

LATH CUT, 1912 AND 1913, BY KINDS OF WOOD—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution 1913.

Kind of Wood.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M.	
	1912. M	1913. M	1913.	1913. \$	1912 \$ cts.	1913 \$ cts.
<b>Total</b> .....	<b>899,616</b>	<b>739,678</b>	<b>100.0</b>	<b>1,783,383</b>	<b>2.30</b>	<b>2.41</b>
Spruce.....	329,429	259,600	35.1	630,045	2.39	2.44
White Pine.....	225,148	222,303	30.1	598,662	2.56	2.66
Cedar.....	173,319	131,977	17.8	299,476	2.18	2.22
Douglas Fir.....	80,458	61,386	8.3	83,524	1.60	1.33
Hemlock.....	33,873	27,366	3.7	70,089	2.41	2.53
Red Pine.....	21,751	27,083	3.7	80,027	2.52	3.11
Balsam Fir.....	23,082	3,606	0.5	8,605	1.59	2.33
Larch.....	1,888	2,398	0.3	4,796	1.15	2.00
Jack Pine.....	6,181	2,340	0.3	4,659	1.61	1.99
Basswood.....	841	816	0.1	1,668	2.48	2.00
Yellow Pine.....	859	693	0.1	1,515	2.23	2.19
Poplar (Aspen).....		60	•	80		1.33
Birch.....	2,061	50	•	137	2.23	2.77
Ash.....	123				2.45	
Elm.....	3				2.00	

\*Less than one tenth of one per cent.

The relative importance of the different kinds of wood used in the manufacture of lath is very similar to that of the woods sawn into lumber. Spruce lath are made in greatest quantities in New Brunswick, where spruce is the most important lumber species. Over ninety per cent of the white pine lath are made in Ontario, where white pine is still the most important lumber tree.

Douglas fir lumber and the greatest part of the cedar lumber is sawn in British Columbia, and this province produces the Douglas fir and the greatest part of the cedar lath.

The more important kinds of wood remained at practically the same place on the list as in 1912 and the average price of lath increased only to a slight extent.

## SHINGLES.

Table 22 gives the details of the production of shingles in Canada in 1912 and 1913 by provinces.

TABLE 22.

SHINGLE CUT, 1912 AND 1913, BY PROVINCES—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Province.	Quantity.		Per Cent Distribution.	Total Value.	Average Value Per M	
	1912.	1913.	1913.	1913.	1912.	1913.
	M	M		\$	\$ cts.	\$ cts.
<b>Canada</b> .....	<b>1,578,343</b>	<b>1,485,279</b>	<b>100.0</b>	<b>3,064,641</b>	<b>2.01</b>	<b>2.06</b>
British Columbia.....	778,045	543,484	43.3	1,204,713	1.93	1.87
Quebec.....	330,874	363,560	24.5	807,035	2.01	2.22
New Brunswick.....	280,081	306,148	20.6	659,381	2.06	2.15
Ontario.....	151,092	128,211	8.6	308,277	2.38	2.40
Nova Scotia.....	22,065	41,327	2.8	81,744	1.69	1.98
Manitoba.....	100	2,124	0.1	2,655	2.00	1.25
Saskatchewan.....		225		506		2.25
Prince Edward Island.....	13,514	200		330	1.75	1.05
Alberta.....	2,572				3.49	

\*Less than one tenth of one per cent.

The decrease in the shingle cut in Canada from 1912 to 1913 was 5.9 per cent as compared to 14.1 per cent from 1911 to 1912. The cut decreased in British Columbia, Ontario, Nova Scotia, and Prince Edward Island, increasing in Quebec, New Brunswick and Manitoba. Alberta did not report any production in 1913, but Saskatchewan reported a small quantity.

British Columbia produces more shingles than any other province, and in 1913 all these were made from one species, western red cedar (*Thuja plicata*). In Quebec over ninety seven per cent of the shingles were made of eastern white cedar (*Thuja occidentalis*). Other less important shingle woods in Quebec were spruce, white pine, balsam fir, jack pine, hemlock and aspen poplar, named in their order of importance.

In New Brunswick, cedar formed ninety eight per cent of the total, the remainder being made up of spruce, balsam fir, hemlock, white pine, red pine and aspen poplar.

Ontario manufactures a large proportion of her shingles from white pine, although cedar headed the list in this province in 1913. Shingles were also made in Ontario of hemlock, red pine, spruce, poplar, balsam fir, butternut and jack pine.

In the three Prairie Provinces, as well as in Nova Scotia and Prince Edward Island where cedar is practically unknown, the shingles were made for the most part of spruce, with smaller quantities of balsam fir, and jack pine in the west and cedar, balsam fir, hemlock, white pine, jack pine, aspen, and birch in the two maritime provinces mentioned.

Table 23 gives the details of the production of shingles in Canada in 1912 and 1913 by kinds of wood.

TABLE 23.

SHINGLE CUT, 1912 AND 1913, BY KINDS OF WOOD—Quantity Cut and Total Value 1913, Average Value 1912 and 1913, and Per Cent Distribution, 1913.

Kind of Wood.	Quantity		Per Cent Distribution.	Total Value.	Average Value Per M	
	1912.	1913.	1913.	1913.	1912.	1913.
	M	M		\$	\$ cts.	\$ cts.
<b>Total</b> .....	<b>1,578,343</b>	<b>1,436,379</b>	<b>100.0</b>	<b>3,004,641</b>	<b>7 91</b>	<b>2 84</b>
Cedar.....	1,442,260	1,392,110	93.7	2,858,436	2 00	2 84
Spruce.....	78,056	34,748	2.3	65,156	1 93	1 84
White Pine.....	39,184	30,363	2.0	78,033	2 72	2 24
Balsam Fir.....	8,039	14,172	1.0	28,577	1 46	2 04
Hemlock.....	8,960	10,079	0.7	24,167	2 22	2 44
Red Pine.....	155	2,365	0.2	7,936	1 75	3 34
Jack Pine.....	1,334	1,218	0.1	1,868	1 52	1 84
Poplar (Aspen).....	276	204	*	393	1 82	1 84
Butternut.....	5	20	*	65	2 20	3 24
Ash.....	56				2 84	
Tamarack.....	10				2 00	

\*Less than one tenth of one per cent.

With cedar forming 93.7 per cent of the total production of shingles in Canada the other woods on the list are of little relative importance. Of the total for cedar, 748,626,000 shingles were made from eastern white cedar, as compared to 643,484,000 of western red cedar from British Columbia.

The other woods on the list were used because they were cheap and abundant in the region where they were manufactured or because they formed a part of the mill waste which could be profitably manufactured into shingles. In very few cases were they chosen on account of any quality they possessed that fitted them for shingle woods. Wherever cedar can be obtained in quantity in Canada it has been, and probably will be, the favorite material for this purpose. The wood splits easily and evenly, has a straight grain, holds nails well and is the most durable of the Canadian woods when exposed to moisture.

## Pulpwood Consumption, 1913.

This bulletin is based on reports received from 48 firms operating pulpmills in Canada in 1913. Altogether 64 mills are operated by these firms as follows:—Quebec, 26 firms operating 34 mills; Ontario, 12 firms operating 17 mills; Nova Scotia, 4 firms operating 6 mills; New Brunswick, 4 firms operating 4 mills; and British Columbia, 2 firms operating 3 mills.

In addition to these active firms, reports were received from 10 firms whose mills were idle in 1913, and from 5 firms with mills under construction.

The 48 active firms reporting in 1913 consumed in their mills a total of 1,109,034 cords of pulpwood, valued at the mill at \$7,243,368. A total of 1,035,030 cords of unmanufactured pulpwood, valued at \$7,070,571, was exported from Canada to the United States during the same year, bringing the total production of pulpwood to 2,144,064 cords valued at \$14,313,939.

A list of active Canadian pulp mills and map showing their location will be found in Appendix No. 2 of this bulletin.

### PULPWOOD.

Table 1 shows the quantity, total value and average value per cord of the pulpwood used in each of the provinces of Canada in 1912 and 1913, and the number of active firms reporting in each case.

TABLE 1.

PULPWOOD, 1912 AND 1913, BY PROVINCES:—Quantity cut and total value 1913, average value 1912 and 1913, and per cent distribution, 1913.

Provinces.	No. of A. F. Report- ing	Quantity.		Per Cent Distribu- tion.	Total value	Average Value per Cord.	
		1912.	1913.			1912.	1913.
		Cords.	Cords.		\$	\$ c.	\$ c.
Canada.....	48	866,042	1,109,034	100.0	7,243,368	6 02	6 53
Quebec.....	26	578,855	629,934	56.8	4,107,689	5 85	6 52
Ontario.....	12	173,903	321,244	29.0	2,297,389	7 10	7 15
British Columbia.....	2	35,067	84,173	7.6	401,218	5 51	4 77
New Brunswick.....	4	52,041	53,121	4.8	342,243	5 52	6 44
Nova Scotia.....	4	26,173	20,562	1.8	94,829	4 32	4 61

The quantity of pulpwood consumed in Canadian pulp-mills in 1913 was an increase of 28.1 per cent over that of 1912. The average price of raw pulpwood at the mill increased by 51 cents a cord, making an increase of 38.9 per cent in the total value of the raw material used in this industry.

Quebec and Ontario still led the other provinces in 1913, as in 1912 British Columbia displaced Nova Scotia from fourth place on the list in 1912 and displaced New Brunswick from third place in 1913. This province now consumes 7.6 per cent of the pulpwood used in Canada, and will probably increase this

proportion in the future, as the pulp industry on the Pacific coast is still in infancy. There was an increase in consumption in every province but Nova Scotia, where the closing of four mills resulted in a decrease of 21.4 per cent. The increases were:—Quebec, 8.8 per cent; Ontario, 84.7 per cent; British Columbia, 140.0 per cent; New Brunswick, 2.1 per cent.

The average cost of pulpwood at the mill in Canada in 1913, was \$6.53 per cord, an increase of 8.5 per cent from 1912. The cost increased in Quebec, Ontario, New Brunswick and Nova Scotia and decreased in British Columbia.

Diagram No. 1 presents in graphic form the 1913 pulpwood consumption of the various provinces.

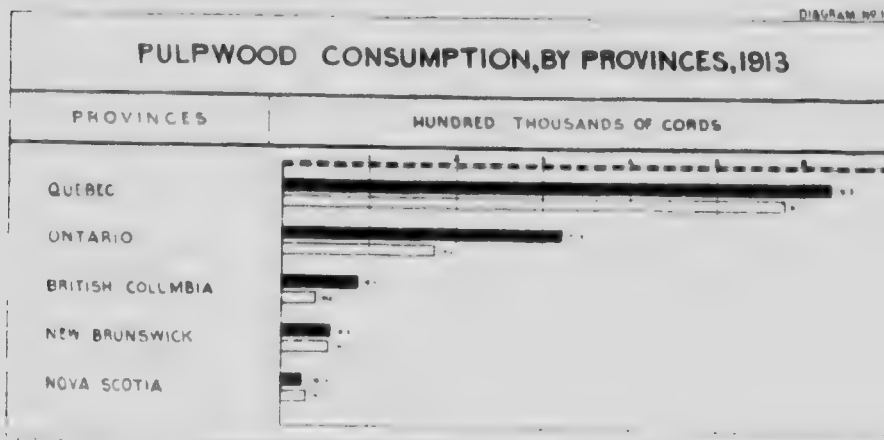


Table 2 shows the quantity, value, and per cent distribution of the kinds of wood used in making pulp in Canada in 1913.

TABLE 2.

PULPWOOD, 1912 AND 1913, BY KINDS OF WOOD: Quantity cut and total value 1913, average value 1912 and 1913, and per cent distribution, 1913.

Kinds of Wood.	Quantity.		Per Cent	Total	Average Val.	
	Distribution.		1913.	1913.	per Cord.	
	1912.	1913.				
	Cords.	Cords.		\$	\$ c.	\$
Total.....	866,042	1,109,034	100.0	7,243,368	6.02	6.53
Spruce.....	677,747	754,858	68.1	5,104,221	6.09	6.09
Balsam Fir.....	164,587	283,292	25.6	1,800,911	5.81	6.09
Hemlock.....	19,178	47,360	4.3	201,480	5.53	6.09
Jack Pine.....	40	19,383	1.7	101,673	4.00	5.53
Poplar.....	4,405	4,141	0.4	29,081	6.21	7.00
Larch.....	85				4.00	

Only five kinds of wood were used in the manufacture of pulp in 1913. Spruce headed the list with over two-thirds of the total. The percentage of balsam fir used in pulp-making has increased steadily as the prejudices against this wood have been overcome. In 1911 balsam fir formed 17.5 per cent of the

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consumption

total; in 1912, 19.0 per cent; and in 1913, 25.5 per cent. The wood has been found to make excellent pulp, equal in many cases to that made from spruce alone, but a prejudice existed against its use. Fir generally gives a 10 per cent lower yield of pulp than spruce, and is therefore not so desirable from the mill operator's standpoint.

Diagram No. 2 presents graphically the quantities of various woods used for pulp in 1913.

PULPWOOD CONSUMPTION, BY SPECIES, 1913

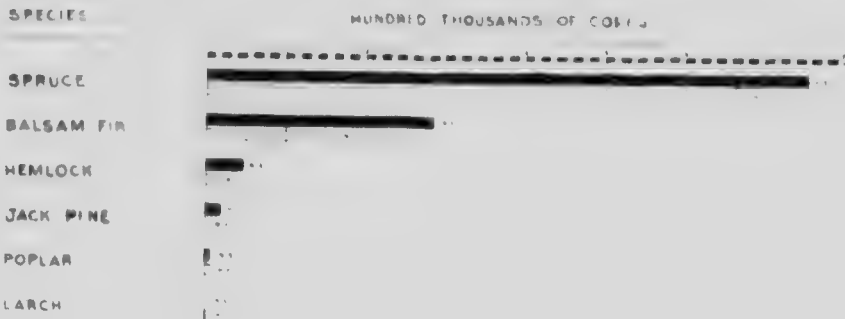


Table 3 shows the extent to which the five different kinds of wood were used in each province in 1913 in the different processes of pulp manufacture.

TABLE 3.

PULPWOOD, 1913, BY PROVINCES, KINDS OF WOOD AND PROCESSES: Quantity of wood used.

and total  
on, 1913.

Provinces      Total      Spruce      Balsam Fir      Hemlock      Jack Pine      Poplar.

TOTAL—ALL PROCESSES.

verage Value  
per Cord.

1912.      1913.

c.      c.

6.02      6.53

6.09      6.76

5.81      6.38

5.53      4.25

4.00      5.25

6.21      7.02

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	Cords.	Cords.	Cords.	Cords.	Cords.	Cords.
Canada	1,109,034	754,858	283,292	47,360	19,383	4,141
Quebec	629,934	389,523	222,738	705	13,127	3,641
Ontario	321,244	259,999	54,165	524	6,056	300
British Columbia	84,173	39,742		11,431		
New Brunswick	53,121	48,037	5,084			
Nova Scotia	20,562	17,557	1,305	1,700		

MECHANICAL PROCESS.

	Cords.	Cords.	Cords.	Cords.	Cords.
Canada	600,216	398,429	182,413	18,894	500
Quebec	398,664	243,480	155,184		
Ontario	135,753	111,413	23,840		00
British Columbia	38,535	21,341		17,194	
Nova Scotia	20,562	17,557	1,305	1,700	
New Brunswick	6,702	4,618	2,084		

## SULPHITE PROCESS.

Canada.....	367,105	263,228	74,116	27,761	2,000
Quebec.....	105,650	62,859	40,791		2,000
Ontario.....	175,398	144,549	30,325	524	
British Columbia.....	45,638	18,401		27,237	
New Brunswick.....	40,419	37,419	3,000		

## SULPHATE PROCESS.

Canada.....	136,569	90,423	26,763	19,383
Quebec.....	120,476	80,386	26,763	13,327
Ontario.....	10,093	4,037		6,056
New Brunswick.....	6,000	6,000		

## SODA PROCESS.

Canada.....	5,144	2,798	705	1,641
Quebec.....	5,144	2,798	705	1,641

The manufacture of ground-wood pulp still consumed over half (54.1 per cent) of the wood used for pulp-making in Canada. This percentage has been decreasing in the last few years. The sulphite process, the most important of the chemical processes, was used in converting a third of the total quantity of wood into pulp in 1913. This proportion is practically the same as in 1912.

The increased manufacture of Kraft papers has caused an increased demand for pulp made by the sulphate process. This process was used with 12.3 per cent of the pulpwood in 1913, as compared to 7.7 per cent in 1912. The manufacture of soda pulp has greatly decreased, only 5,144 cords of wood being used for this process.

Diagram No. 3. shows graphically the relative use of the various process in 1913.

DIAGRAM NO. 3

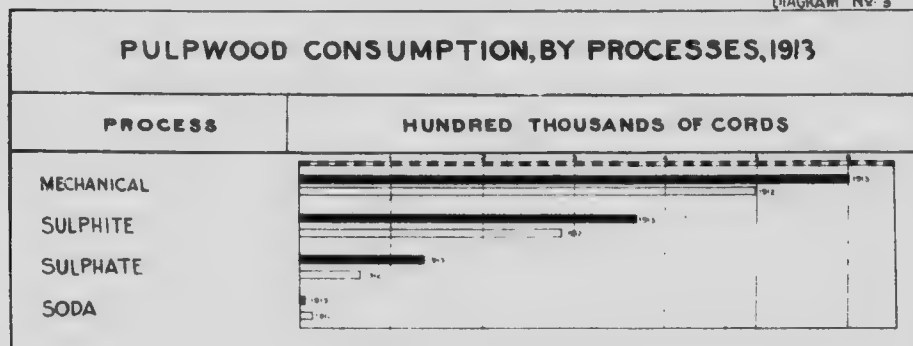


Table 4 gives a summary of the information contained in the first three tables with some additional details.

TABLE 4.

PULPWOOD, 1913, BY PROVINCES, KINDS OF WOOD AND PROCESSES: Number of active firms reporting, quantity of pulpwood used, quantity of pulp produced, quantity of each kind of wood used in each process, total cost and average cost per cord.

	Total.	Quebec.	Ontario.	British Columbia.	New Brunswick.	Nova Scotia.
Number of Active Firms Reporting	48	26	12	2	4	4
Pulp Produced—						
Aggregate..... tons.	854,624	514,299	228,498	61,354	29,911	20,562
Mechanical..... "	600,216	398,664	135,753	38,535	6,702	20,562
Sulphite..... "	183,552	52,825	87,699	22,819	20,209	
Sulphate..... "	68,284	60,238	5,046		3,000	
Soda..... "	2,572	2,572				
Wood Used—						
Aggregate..... Cords	1,109,034	629,934	321,244	84,173	53,121	20,562
Aggregate cost..... \$	\$7,243,368	\$4,107,689	\$2,297,389	\$401,218	\$342,243	\$94,829
Average cost..... \$	\$ 6 53	\$ 6 52	\$ 7 15	\$ 4 77	\$ 6 44	\$ 4 61
Spruce—						
Total..... Cords	754,858	389,523	259,999	39,742	48,037	17,557
Total cost..... \$	\$5,104,221	\$2,623,437	\$1,871,023	\$214,607	\$312,735	\$82,419
Average cost..... \$	\$ 6 76	\$ 6 73	\$ 7 20	\$ 5 40	\$ 6 51	\$ 4 69
Mechanical..... Cords	398,409	243,480	111,413	21,341	4,618	17,557
Sulphite..... "	263,228	62,859	144,549	18,401	37,419	
Sulphate..... "	90,423	80,386	4,037		6,000	
Soda..... "	2,798	2,798				
Balsam Fir—						
Total..... Cords	283,292	222,738	54,165		5,084	1,305
Total cost..... \$	\$1,806,911	\$1,374,315	\$397,478		\$29,508	\$5,610
Average cost..... \$	\$ 6 38	\$ 6 17	\$ 7 34		\$ 5 80	\$ 4 30
Mechanical..... Cords	182,413	155,184	23,840		2,084	1,305
Sulphite..... "	74,116	40,791	30,325		3,000	
Sulphate..... "	26,763	26,763				
Hemlock—						
Total..... Cords	47,360	705	524	44,431		1,700
Total cost..... \$	\$201,480	\$3,877	\$4,192	\$136,611		\$6,800
Average cost..... \$	\$ 4 25	\$ 5 50	\$ 8 00	\$ 4 20		\$ 4 00
Mechanical..... Cords	18,894			17,194		1,700
Sulphite..... "	27,761		524	27,237		
Soda..... "	705	705				
Jack Pine—						
Total..... Cords	19,383	13,327	6,056			
Total cost..... \$	\$101,675	\$80,479	\$21,196			
Average cost..... \$	\$ 5 25	\$ 6 04	\$ 3 50			
Sulphate..... Cords	19,383	13,327	6,056			
Poplar—						
Total..... Cords	4,141	3,641	500			
Total cost..... \$	\$29,081	\$25,581	\$3,500			
Average cost..... \$	\$ 7 02	\$ 7 03	\$ 7 00			
Mechanical..... Cords	500		500			
Sulphite..... "	2,000	2,000				
Soda..... "	1,641	1,641				

The 48 active firms reporting pulp manufacture in 1913 operate altogether 64 different pulp-mills. These firms each used on an average 23,105 cords of wood, as compared to 18,042 in 1912. Each one of the individual 65 mills con-

sumed an average of 17,062 cords of pulpwood. The largest individual mills are situated in British Columbia where the average mill consumption was 28,058 cords. Quebec has the greatest number of mills, and the average consumption of these was 18,527 cords. The average mill consumption in the other provinces was as follows:—Ontario, 18,897 cords; New Brunswick, 13,280 cords; and Nova Scotia, 5,140 cords.

The figures given in Table 4 for pulp produced are estimated from the quantities of pulpwood consumed and the method of manufacture. One cord of wood is assumed to produce one ton of ground-wood pulp or half a ton of chemical fibre, air-dry.\*

So many conditions affect the average price of pulpwood that the figures given above cannot be taken too literally. Some mills purchase pulpwood on the open market and pay high prices for it, plus the cost of transportation. Other firms own their limits and pay only the cost of cutting and transporting the material. The prices, however, can be depended upon to indicate any important change from year to year.

TABLE 5.

CANADIAN PULPWOOD EXPORTED UNMANUFACTURED VS. THAT MANUFACTURED IN CANADA, 1912 AND 1913: Quantity, average value per cord and per cent distribution.

	1912.				1913.			
	Quantity.	Value.	Value per Cord.	Per Cent.	Quantity.	Value.	Value per Cord.	Per Cent.
	Cords.	\$	\$ c.		Cords.	\$	\$ c.	
Canada—								
Production.....	1,846,910	11,911,415	6 45	100.0	2,144,064	14,313,939	6 68	100.0
Manufacture.....	866,042	5,215,582	6 02	46.9	1,109,034	7,243,368	6 53	51.7
Export.....	980,868	6,695,833	6 82	53.1	1,035,030	7,070,571	6 83	48.3
Quebec—								
Production.....	1,330,870	8,371,923	6 29	100.0	1,432,594	9,495,165	6 63	100.0
Manufacture.....	578,855	3,386,705	5 85	43.5	629,934	4,107,689	6 52	44.0
Export.....	751,855	4,985,218	6 63	56.5	802,260	5,387,476	6 71	56.0
Ontario—								
Production.....	246,282	1,692,662	6 87	100.0	405,943	2,822,859	6 95	100.0
Manufacture.....	173,903	1,235,343	7 10	70.6	321,244	2,297,389	7 15	79.1
Export.....	72,379	457,319	6 32	29.4	84,699	525,470	6 20	20.9
New Brunswick—								
Production.....	202,942	1,492,567	7 35	100.0	194,674	1,449,525	7 45	100.0
Manufacture.....	52,041	287,060	5 52	25.7	53,121	342,243	6 44	27.3
Export.....	150,901	1,205,507	7 99	74.3	141,553	1,107,282	7 82	72.7
British Columbia—								
Production.....	35,067	193,265	5 51	100.0	84,242	402,428	4 78	100.0
Manufacture.....	35,067	193,265	5 51	100.0	84,173	401,218	4 77	99.9
Export.....					69	1,210	17 54	0.1
Nova Scotia—								
Production.....	31,949	160,998	5 04	100.0	26,611	143,962	5 41	100.0
Manufacture.....	26,176	113,209	4 32	81.9	20,562	94,829	4 61	77.3
Export.....	5,773	47,789	8 28	18.1	6,049	49,133	8 12	22.7

\*Air-dry pulp is assumed to contain 10 per cent of moisture and 90 per cent "bone-dry" fibre.

Table 5 shows the extent to which Canada exports raw or unmanufactured pulpwood. The figures are based on information received from the Department of Customs for the calendar years 1911 and 1912.

In 1912 Canada manufactured 46.9 per cent of her pulpwood in her own mills. In 1913 this percentage increased to 51.7 per cent, and for the first time in the history of the industry more than half of the pulpwood produced in Canada was manufactured into pulp in Canadian pulp-mills.

During 1913 each province, except Nova Scotia, used an increased proportion of its pulpwood for home manufacture. The greatly increased production of pulpwood in British Columbia, together with the fact that this province manufactures practically all (99.9 per cent) of its pulpwood at home, is largely responsible for the increased proportion for the whole of Canada.

Laws exist in Ontario whose strict enforcement has checked the export of raw pulpwood. In this province 79.1 per cent of the pulpwood is used in home manufacture. The exports of raw pulpwood have increased in Nova Scotia from 0.3 per cent in 1911 to 22.7 per cent in 1913. Laws prohibiting the export of raw pulpwood from Crown lands in Quebec came into force on September 1, 1910. Since that time the export for the province has decreased steadily from 69.4 per cent in 1910 to 62.0 per cent in 1911, 56.5 per cent in 1912, and 56.0 per cent in 1913. This proportion probably represents approximately the proportion of pulpwood cut on Crown lands and privately owned limits, and may remain stable for some time. In New Brunswick the restrictive legislation of October 1, 1911, checked the export of raw material, and in 1913 a slight increase in the proportion of pulpwood consumed in the province is to be noted. This province still exports a greater proportion of its pulpwood in the raw state than any other.

Canada exported in 1913 to the United States 1,035,030 cords of unmanufactured pulpwood valued at \$7,070,571, or at \$6.83 a cord. Canadian pulp manufacturers operated 65 mills in that year. If the exported material had been manufactured into pulp in Canada it would have been sufficient to supply 60 mills each consuming 17,062 cords of pulpwood, the average consumption of Canada's 65 mills in 1913.

Canadian pulp-mill operators paid an average price of \$6.53 per cord for their raw material. The exporters received only 20 cents a cord more than this for the wood sent to the United States.

This 1,035,030 cords of pulpwood if manufactured into pulp, would have made 1,035,030 tons of ground-wood, or 517,515 tons of chemical fibre. Ground-wood pulp is worth at least \$14 a ton, which would give \$14,490,420 as the value of the pulp made from the wood exported in 1913. Had this wood been made into chemical fibre at an average price of \$38 a ton, its value would have been \$19,665,570. In reality only \$7,070,571 was received for this wood. The pulp industry lost the profit which could have been made by manufacturing this wood into pulp, and the country at large lost the money which would have represented the cost of manufacture in the form of wages, etc.

## WOOD-PULP.

Table 6 shows the details of the export of manufactured wood-pulp from Canada in 1912 and 1913. The figures were furnished by the Customs Department.

TABLE 6.

EXPORT OF WOOD-PULP, 1912 and 1913: Quantity, total value, average value per ton, per cent distribution and countries to which exported.

Kinds of Pulp and Countries to which Exported.	1912.				1913.			
	Quantity.	Value.	Average Value per Ton.	Per Cent.	Quantity.	Value.	Average Value per Ton.	Per Cent.
	Tons.	\$	\$ c.		Tons.	\$	\$ c.	
Wood-pulp exported, aggregate.....	384,100	5,952,361	17 10	100.0	298,169	5,913,560	19 83	100.0
Total Mechanical Pulp.....	295,449	3,991,365	13 51	84.9	230,644	3,317,565	14 38	77.4
Total Chemical Pulp.....	52,651	1,960,996	37 24	15.1	67,525	2,595,995	38 44	22.6
Total to United States.....	218,936	4,525,569	20 67	62.9	198,110	4,471,939	22 57	66.4
Mechanical.....	167,448	2,607,589	15 57		137,922	2,150,227	15 59	
Chemical.....	51,488	1,917,980	37 25		60,188	2,321,712	38 57	
Total to Great Britain.....	127,981	1,384,833	10 82	36.8	92,916	1,172,750	12 62	31.2
Mechanical.....	127,945	1,382,006	10 81		92,722	1,167,338	12 59	
Chemical.....	36	1,827	51 86		194	5,412	27 90	
Total to Japan.....	1,046	36,665	35 05	0.3	7,031	265,071	37 70	2.1
Mechanical.....	56	750	13 39					
Chemical.....	990	35,915	36 28		7,031	265,071	37 70	
Total to China.....	116	4,294	37 02	*	112	3,800	33 93	*
Chemical.....	116	4,294	37 02		112	3,800	33 93	
Total to New Zealand.....	21	940	44 76	*				
Chemical.....	21	940	44 76					

\* Less than one tenth of one per cent.

The export of wood-pulp from Canada decreased from 1912 to 1913 by 22.4 per cent, in spite of an increase of 25.2 per cent in the quantity manufactured. This would seem to indicate increased activity in the domestic manufacture of paper. Decreases are to be noted in the exports of pulp to the United States, Great Britain and China. New Zealand did not import Canadian pulp in 1913. The only increase reported was in the export of chemical pulp to Japan. The United States still takes about two-thirds of Canada's output of pulp, of which about 70 per cent is ground-wood. Great Britain takes a little less than one-third of the total, and her imports are almost entirely ground-wood or mechanical pulp. The exports to Japan and China in 1913 were of chemical fibre only. Altogether 77.4 per cent of the pulp exported was ground-wood, and the remaining 22.6 per cent chemical fibre.

The average price of ground-wood pulp increased by 87 cents and that of chemical fibre by \$1.20, from 1912 to 1913. The price of mechanical pulp exported to the United States increased by only 2 cents a ton, while the increase in price of that sent to Great Britain was \$1.78. The price of chemical fibre exported to the United States increased by \$1.32, and of all fibre to Japan by \$2.65. The chemical pulp exported to Great Britain was valued at a little more than half the value in the previous year. A reduction in price of \$3.09 was also reported for the pulp exported to China.

Table 7 gives the details of the imports of wood-pulp into Canada from various countries. The figures were supplied by the Customs Department.

TABLE 7.

IMPORTS OF WOOD-PULP, 1912 and 1913: Total value, per cent distribution and countries from which imported.

Countries from which imported.	1912.		1913.	
	Value.	Per Cent.	Value.	Per Cent.
	\$		\$	
<b>Total Value of Imports.....</b>	<b>172,797</b>	<b>100.0</b>	<b>356,862</b>	<b>100.0</b>
United States.....	100,234	58.0	302,543	85.1
Sweden.....	64,419	37.3	36,843	10.3
Great Britain.....	4,764	2.7	10,197	2.8
Germany.....	2,546	1.5	3,886	1.1
Norway.....			1,387	0.4
Switzerland.....			1,006	0.3
Austria-Hungary.....	\$34	0.5		

The imports of wood-pulp into Canada in 1913 were valued at \$356,862, as compared to \$172,797 for 1912. This is an increase of over 100 per cent, the imports from the United States having more than tripled during 1913. The importations from Great Britain more than doubled, and those from Germany increased by over half those in 1912. The importations of wood-pulp from Sweden decreased by 42.8 per cent. Pulp was imported from Norway and Switzerland in 1913, but not in the previous year. No pulp was imported from Austria Hungary in 1913. The United States in 1913 supplied over four-fifths of the total (85.1 per cent), as compared to a little over a half (58.0 p.c.) in 1912.

## POLES PURCHASED IN 1913.

Reports received from 424 pole purchasers in Canada in 1913 were used as a basis for the statistics in this bulletin. These pole purchasers consisted of 218 telephone companies, 155 electric light and power concerns, 29 electric railways, 18 steam railways and 4 telegraph companies.

The statistics have been divided into two main groups: first, those received from steam-railway, telegraph and telephone companies, and second, those received from electric railway, power and light concerns.

Table 1 gives the details of the poles purchased in Canada in 1913 by kinds of wood divided into these two main classes.

TABLE 1.

POLES PURCHASED, 1912 AND 1913, BY KINDS OF WOOD AND CHIEF USES -  
Number, Total Value, Average Value and Percent Distribution.

Kind of Wood.	1912				1913			
	Number.	Value.	Av. Value	Per Cent.	Number.	Value.	Av. Value.	Per Cent.
TOTAL OF ALL USES.								
<b>Total</b> .....		\$	\$ ct			\$	\$ c.	
White Cedar.....	378,369	613,580	1 83	100.0	264,267	525,853	1 99	49.4
Red Cedar.....	144,222	408,472	2 83	2 37	145,569	488,138	3 35	27.2
Tamarack.....	36,158	46,822	1 29	5.9	115,517	155,682	1 35	21.6
Spruce.....	9,127	10,334	1 13	1.5	5,228	6,046	1 16	1.0
Jack Pine.....	1,790	2,710	1 51	0.3	1,450	1,299	0 90	0.3
Balsam Fir.....	38,000	30,400	0 80	6.2	1,437	1,841	1 28	0.3
White Pine.....					682	8,095	11 37	0.1
Chestnut.....	228	147	0 64	*	167	94	0 56	*
Cypress.....					128	1,056	8 25	*
Hemlock.....	50	65	1 30	*	92	32	0 35	*
Western Larch.....					39	163	4 18	*
Ash.....					16	32	2 00	*
Douglas Fir.....	612	994	1 62	0.1				

### STEAM RAILWAYS AND TELEPHONE AND TELEGRAPH COMPANIES.

<b>Total</b> .....	549,560	839,793	1 51	100.0	469,521	833,259	1 77	100.0
White Cedar.....	341,240	462,964	1 36	62.1	230,360	382,657	1 66	49.1
Red Cedar.....	122,925	278,846	2 27	22.4	115,714	282,389	2 44	24.6
Tamarack.....	36,158	46,822	1 29	6.6	115,212	152,675	1 33	24.5
Spruce.....	8,567	7,869	0 92	1.6	4,393	4,150	0 94	0.9
Jack Pine.....	1,790	2,710	1 51	0.3	1,450	1,299	0 90	0.3
Balsam Fir.....	38,000	30,400	0 80	6.9	1,437	1,841	1 28	0.3
White Pine.....					682	8,095	11 87	0.1
Chestnut.....	228	147	0 64	*	167	94	0 56	*
Hemlock.....	40	40	1 00	*	90	27	0 30	*
Ash.....					16	32	2 00	*
Douglas Fir.....	612	995	1 63	*				

\* Less than one-tenth of one per cent.

TABLE 1—Continued.

POLES PURCHASED, 1912 AND 1913, BY KINDS OF WOOD AND CHIEF USES—  
Number, Total Value, Average Value and Percent Distribution.

ELECTRIC RAILWAY, POWER AND LIGHT COMPANIES

Total	58,996	282,731	4 79	100.0	15,071	355,072	5 45	100.0
White Cedar	37,129	150,615	4 06	62.9	33,907	143,196	4 22	52.1
Red Cedar	21,297	129,626	6 09	36.1	29,855	205,749	6 89	45.0
Spruce	560	2,463	4 40	0.9	835	1,896	2 27	1.1
Tamarack					305	3,007	9 89	0.1
Cypress					128	1,056	8 25	0.1
Western Larch					39	163	4 18	0.1
Hemlock					21	5	2 50	0.1

\* Less than one-tenth of one per cent.

The consumption of wooden poles in Canada varies greatly from year to year. There was a decrease of about 30 per cent in the numbers purchased from 1910 to 1911, an increase of 3.9 per cent from 1911 to 1912, and a decrease of 12.2 per cent from 1912 to 1913.

Eastern white cedar (*Thuja occidentalis*) still heads the list, as it always has done in the past. The supply of good eastern white cedar poles, however, is visibly decreasing, as is demonstrated by the fact that at least 20 per cent of the poles purchased in 1913 were imported from the United States. The western species of red cedar (*Thuja plicata*) is more abundant and is now taking the place of the eastern species, especially in the greater length-classes. Poles of this wood are used extensively in the western provinces and more particularly in British Columbia, where this tree grows. In the Prairie provinces the poles are about half of the eastern species and half of the western. Of the red cedar poles purchased in 1913, over 8 per cent were imported from the Pacific States, and were classed as "Idaho red cedar," although these are of the same species as those obtained from British Columbia.

Out of a total of 534,592 poles, 12.1 per cent were reported as having been imported from the United States in 1913.

While the total number was a decrease from 1912 to 1913, the total value showed an increase of 6.7 per cent, caused by an increase in the average price amounting to \$0.39.

Telephone and telegraph companies and railway companies operating telephone and telegraph lines used 87.8 per cent of all the poles purchased in Canada in 1913. This is a decrease in numbers of 14.6 per cent, and an increase in value of 0.3 per cent, the average value to these companies increasing by \$0.26.

All the jack pine, balsam fir, white pine, chestnut and ash poles were purchased by companies of this class.

The electric railway, power and light companies' purchases formed only 12.2 per cent of the total, but these poles cost on an average \$3.68 more than those purchased by the telephone and telegraph companies.

The total number was an increase of 10.3 per cent over 1912; while the average price was an increase of \$0.66. These companies imported over 5 per cent of the poles they used in 1913. They purchased all the cypress poles imported into Canada during that year and also all the western larch poles from British Columbia.

The average prices given for certain kinds of poles which have been purchased in small quantities cannot be considered as indicative of the intrinsic value of that particular wood for pole purposes, or even as a fair gauge of its market value, as these individual prices are affected by so many outside conditions, such as cost of transportation, size, etc.

Table 2 gives the details with regard to the poles purchased in Canada in 1913, by kinds of wood, and divided into five length-classes.

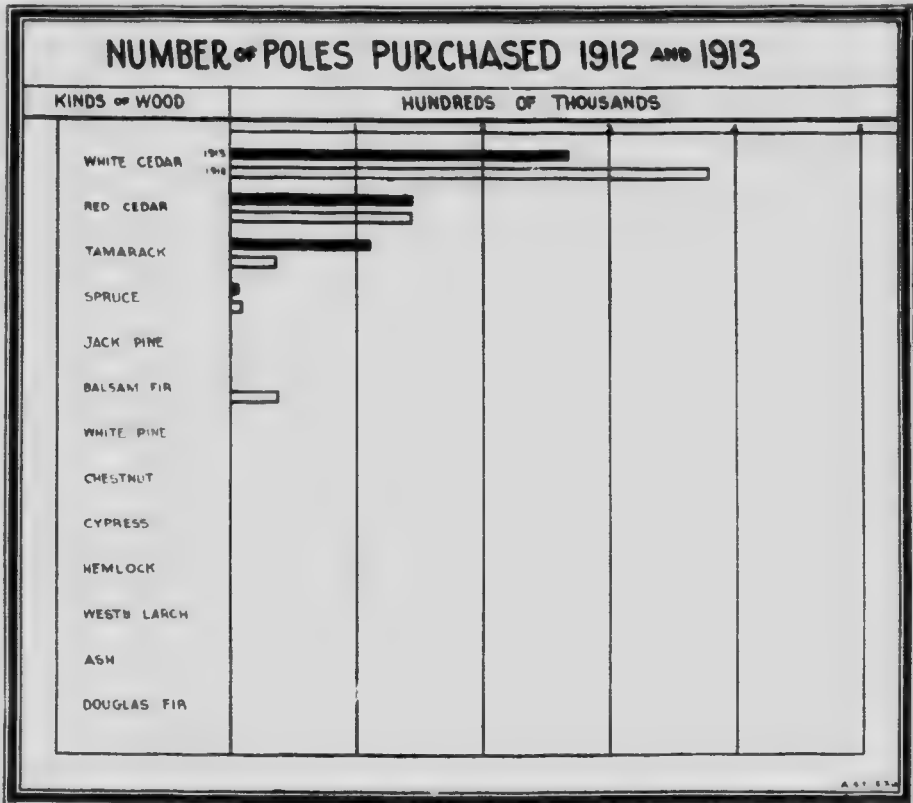


# POLES PURCHASED, 1913.

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In the 26-to-30-foot class the two cedars formed together 98.9 per cent, and tamarack poles became of little relative importance. While the cedar species still formed by far the greater part of the poles in the 31-to-35-foot class, poles of spruce become more important, and cypress poles appeared for the first time. White pine and western larch poles appeared in the 36-to-40-foot class, and here red cedar became more important than white, which is not the case with the shorter classes of poles. In the class of poles over 40 feet in length, red cedar formed over two-thirds of the total.

The diagram below shows, in graphic form, the number of poles of different kinds of wood used in 1912 and 1913:—



## CROSS-TIES PURCHASED IN 1913.

This bulletin is based on reports received from 47 steam railways and 32 electric railways purchasing ties in 1913. The total number of ties purchased was 19,881,714, valued at \$8,740,849, and of this total, 3,254,587 ties valued at \$1,827,358, were reported as having been purchased in the United States. This brings out the fact that Canadian railway companies import 16.4 per cent of their tie material and pay on an average 13 cents a tie more for this than for the native article.

Table 3 gives the details of the ties purchased in Canada in 1912 and 1913, by kinds of wood.

TABLE 3.

CROSS-TIES PURCHASED, 1912 AND 1913, BY KINDS OF WOOD—Number, Value, Average Value and Percent Distribution.

Kind of Wood.	1912.				1913.			
	Number.	Value.	Av. Value.	Per Cent.	Number.	Value.	Av. Value.	Per Cent.
		\$	\$ c.			\$	\$ c.	
<b>Total</b>	<b>31,399,571</b>	<b>9,372,869</b>	<b>0 44</b>	<b>100.0</b>	<b>19,881,714</b>	<b>8,740,849</b>	<b>0 43</b>	<b>100.0</b>
Jack Pine	7,783,034	3,417,238	0 44	36.5	7,773,674	3,103,140	0 40	39.1
White Cedar	3,332,105	1,486,456	0 45	15.6	2,451,527	1,090,436	0 44	12.3
Douglas Fir	2,183,554	661,891	0 30	10.2	2,427,100	801,710	0 33	12.2
Western Larch	1,196,184	514,359	0 43	5.6	1,225,956	636,631	0 52	6.2
Hemlock	1,947,474	743,535	0 38	9.1	1,199,699	455,662	0 38	6.0
Hard Pine	658,096	434,840	0 66	3.1	1,138,351	621,732	0 55	5.7
Oak	933,486	624,174	0 67	4.4	978,554	673,244	0 69	4.9
Tamarack	1,803,696	806,049	0 45	8.5	866,231	369,666	0 43	4.4
Western Hemlock					479,113	148,725	0 31	2.4
Spruce	835,121	330,854	0 40	3.9	458,256	151,049	0 33	2.3
Western Spruce	8,000	4,640	0 58	*	267,917	70,685	0 54	1.3
Chestnut	266,082	157,225	0 59	1.2	232,179	126,795	0 55	1.2
Red Cedar	82,357	29,109	0 35	0.4	115,578	77,328	0 67	0.6
Red Pine	26,646	12,673	0 48	0.1	114,852	52,112	0 45	0.6
Beech	103,583	70,220	0 68	0.5	96,923	60,352	0 62	0.5
Birch	37,943	22,605	0 60	0.2	24,736	10,447	0 42	0.1
Maple	61,465	39,681	0 77	0.2	16,860	14,381	0 85	0.1
Elm	2,868	1,361	0 47	*	13,674	6,421	0 47	0.1
Ash					503	216	0 43	*
Cherry					31	17	0 55	*
White Pine	44,408	15,348	0 35	0.2				
Balsam Fir	12,469	1,621	0 13	0.1				

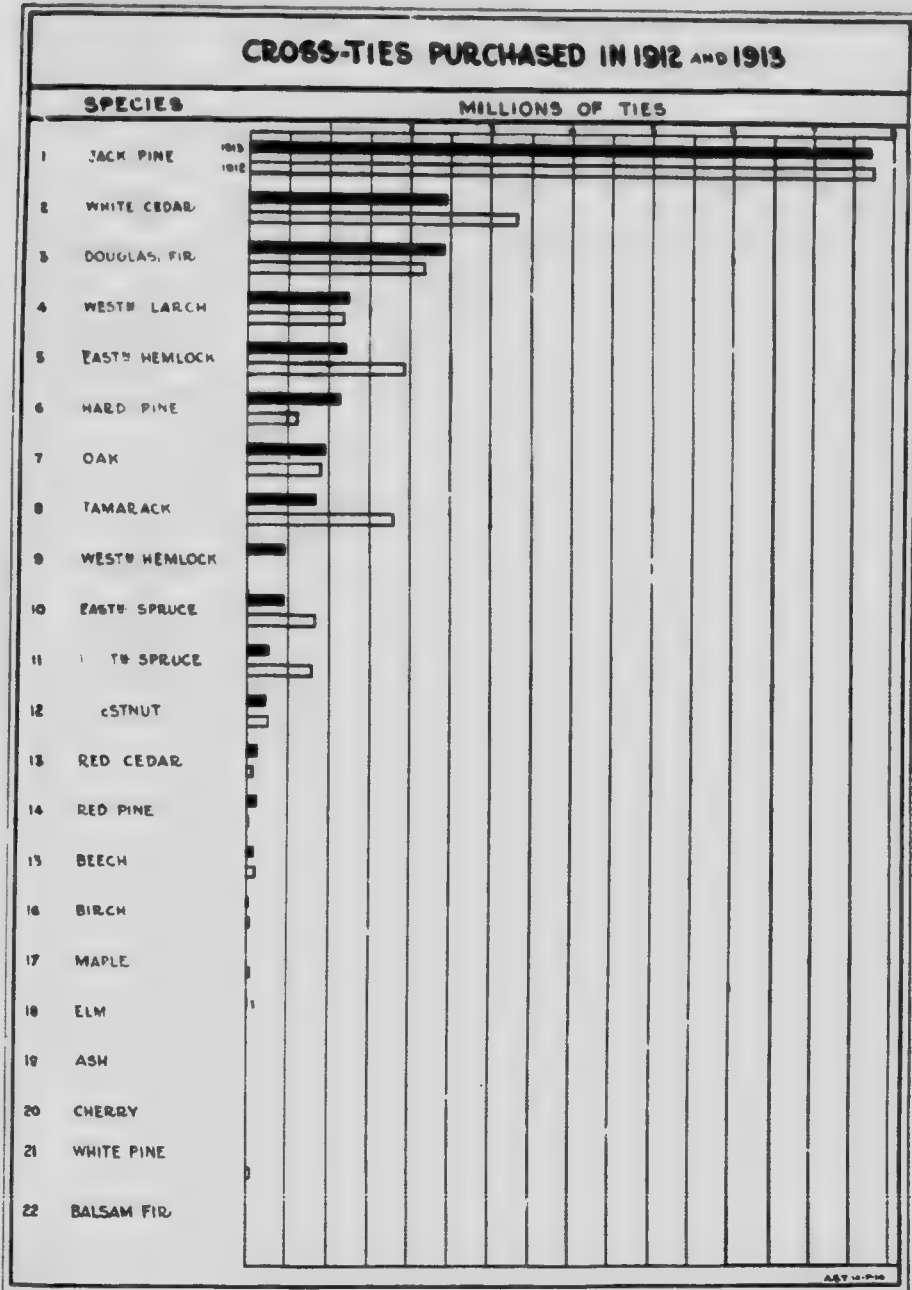
\*Less than one-tenth of one per cent.

The decrease in the number of ties purchased in 1913 was 6.7 per cent of the total for 1912. Out of twenty kinds of wood reported, the two most important—jack pine and white cedar—were reported in smaller quantities than in 1912, as were seven of the other kinds of wood.

# CROSS-TIES PURCHASED, 1913.

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The diagram below shows, in graphic form, the total number of cross-ties of different species purchased in 1912 and 1913:—



The use of Douglas fir increased, and ties of this wood formed 12.2 per cent of the total as compared to 10.2 per cent in 1912. The use of this wood has steadily increased since 1908. Four other British Columbia species, namely Western larch, spruce, hemlock and red cedar, all showed increases from 1912 to 1913. The eastern species of these woods all showed decreases during the same year. Oak ties, of which the greater part are in the West, were purchased in increased numbers, but all the other hardwood, with the exception of elm, showed decreases.

The average price of ties of all classes was practically the same in 1913 as in the preceding year. The two most important classes were purchased at a slightly lower price than in 1912, and of the others, there were four increases and eight decreases.

Table 4 shows the details with regard to the ties purchased by the 47 steam railways in 1912 and 1913, by kinds of wood.

TABLE 4.  
CROSS-TIES PURCHASED, 1912 AND 1913, BY STEAM RAILWAYS, BY KINDS OF WOOD.—Number, Value, Average Value and Percent Distribution.

Kind of Wood.	1912				1913.			
	Number.	Value.	Av. Value.	Per cent.	Number.	Value.	Av. Value.	Per cent.
<b>Total</b>	<b>29,825,200</b>	<b>\$ 3,131,625</b>	<b>\$ cts. 0 44</b>	<b>100.0</b>	<b>19,490,491</b>	<b>\$ 2,245,106</b>	<b>\$ cts. 0 42</b>	<b>100.0</b>
Jack Pine	7,757,418	3,402,417	0 44	37.3	7,706,720	3,070,003	0 40	39.5
Douglas Fir	2,026,624	593,859	0 29	19.7	2,421,118	799,271	0 33	12.4
White Cedar	3,172,629	1,398,774	0 44	45.2	2,305,868	1,013,753	0 44	11.8
Western Larch	1,196,184	514,359	0 43	5.7	1,223,444	634,742	0 52	6.3
Hemlock	1,894,711	720,109	0 38	9.1	1,180,131	448,235	0 38	6.1
Hard Pine	653,896	431,900	0 66	3.1	1,136,356	619,924	0 55	5.8
Oak	930,561	621,783	0 67	4.5	963,794	660,200	0 69	4.9
Tamarack	1,772,151	786,853	0 44	8.5	838,999	355,858	0 42	4.3
Western Hemlock					479,113	148,735	0 31	2.5
Spruce	818,485	325,202	0 40	3.9	450,256	148,249	0 33	2.3
Western Spruce								
Chestnut	266,062	157,225	0 59	1.3	267,917	70,688	0 26	1.4
Red Pine	26,646	12,673	0 48	0.1	232,179	126,795	0 55	1.2
Beech	103,583	70,220	0 68	0.5	114,852	52,112	0 45	0.6
Birch	37,943	22,605	0 60	0.2	24,736	10,447	0 42	0.1
Red Cedar	57,357	16,234	0 28	0.3	20,578	6,761	0 33	0.1
Maple	51,465	39,681	0 77	0.2	16,799	14,320	0 85	0.1
Elm	2,778	1,195	0 43	*	10,326	4,440	0 43	0.1
Ash					503	216	0 43	*
Cherry					31	17	0 55	*
White Pine	44,227	14,965	0 34	0.2				
Balsam Fir	12,469	1,621	0 13	0.1				

\* Less than one-tenth of one per cent.

A total of 19,490,491 ties, or 98.0 per cent of all those purchased in Canada, were used by the steam railways. This total is a decrease of 6.1 per cent from the total for 1912.

The ties imported for use by this class of companies amounted to 3,235,022, valued at \$1,813,256, and formed 16.6 per cent of the total.

The jack pine ties included in this table were made up of two separate species, eastern jack pine (*Pinus Banksiana*), which is cut in every province east of British Columbia, and lodgepole pine (*Pinus Murrayana*), which is cut only in British Columbia and western Alberta. Although this is one of the most widely distributed and abundant trees in Canada, the steam railways reported the purchase of 161,023 imported jack pine ties coming from the United States.

This wood is used for ties chiefly because of its cheapness and abundance and the fact that it is fairly strong. Untreated jack pine ties decay very rapidly in the road-bed, and the practice of treating them to prevent decay is becoming more prevalent each year. In 1913, 709,227 jack pine ties received preservative treatment before being laid in the road-beds of the steam roads of Canada.

Douglas fir ties are fairly durable, and no treated material of this kind was reported in 1913. A small percentage (5.8 per cent) of the Douglas fir ties were imported from the Pacific States.

White cedar (*Thuja occidentalis*) is one of the most durable woods in Canada and has always been a favourite tie material, although its softness makes frequent renewals necessary where the traffic is heavy. Most of the cedar ties used wear out before they decay, and therefore preservative treatment is not necessary under existing conditions. White cedar ties are obtained in Ontario, Quebec and New Brunswick, and 6.6 per cent of those purchased came from the Lake States.

Western larch or tamarack (*Larix occidentalis*) is a hard, strong wood, but one which is not so durable that preservative treatment does not effect a saving in its use. The wood is cut in British Columbia, and 4.7 per cent of the ties used in Canada in 1913 were imported from Washington and Oregon. Altogether only 3.4 per cent of the larch ties were treated.

Eastern hemlock (*Tsuga canadensis*) is cut only in the provinces east of Manitoba, and is not considered a first-class tie material. All the ties of this wood were purchased in Canada, and none were given any preservative treatment.

Oak ties were the most expensive on the list among the more important woods and were used for switch ties and on lines where the traffic was exceptionally heavy. By far the greatest number of the oak ties were imported (96.8 per cent coming from the United States) and were made up of a large number of commercial species. The fact that it pays to apply preservative treatment to a hard, strong, and even durable wood like oak, is demonstrated by the fact that the steam railways in Canada in 1913 purchased 525,623 treated oak ties, this number forming over half (54.3 per cent) of the total.

Hard pine from the Southern Atlantic and Gulf States forms an increasing proportion of the tie material imported into Canada each year. This wood does not grow in Canada, and is the product of at least four different species of pine, the most valuable of which is longleaf pine (*Pinus palustris*). The wood of the hard pines, when used for ties, usually decays before it fails through mechanical wear, and therefore it repays the cost of a preservative treatment that will postpone this decay. Of the hard pine ties used in Canada by the steam railways in 1913, 17.5 per cent were treated.

Western spruce is made up of two species, which are confined for the most part to the province of British Columbia. Engelmann spruce (*Picea Engelmanni*) is found on the Rocky Mountains and in the eastern part of British Columbia and Sitka spruce (*Picea sitchensis*) is cut on the coast. All the western spruce ties were native material, and on account of their rapid rate of decay in the ground, 34 per cent of those purchased were given preservative treatment.

Eastern tamarack (*Larix laricina*) is very similar to the western species, and has always been a favorite tie material on account of its spike-holding qualities. About half the tamarack ties were imported and none were reported to have been treated.

Western hemlock (*Tsuga heterophylla*) is usually considered to be a much better tie material than the eastern species, but in British Columbia, where this tree grows, it has so many rivals among the good tie timbers that it is not used to a very great extent at the present time. All the Western hemlock ties were purchased in British Columbia, and none were given preservative treatment.

Eastern spruce in Canada is made up of three different species that grow east of the Rocky Mountains. All the spruce ties were of native material and none were treated.

Chestnut (*Castanea dentata*) is one of the most durable woods of America, although the wood is not to be classed among the hard, heavy tie materials. Practically all the chestnut ties were imported from the eastern States, and none were treated.

Of the other hardwoods purchased, such as beech, birch and maple, the greater part of the ties were treated before being laid.

Altogether about 12 per cent of the ties purchased by the steam railways in 1913 received some sort of treatment to prevent decay.

Table 5 gives the details of the ties purchased by the 32 electric railways in Canada in 1912 and 1913, by kinds of wood.

TABLE 5.

CROSS-TIES PURCHASED, 1912 AND 1913, BY ELECTRIC RAILWAYS, BY KINDS OF WOOD—Number, Total Value, Average Value and Percent Distribution.

Kind of Wood.	1912.				1913.			
	Number.	Value.	Av. Value	Per cent.	Number.	Value.	Av. Value	Per cent.
<b>Total.</b>	<b>483,362</b>	<b>\$ 242,195</b>	<b>\$ cts. 0 50</b>	<b>100-0</b>	<b>381,223</b>	<b>\$ 225,066</b>	<b>\$ cts. 0 58</b>	<b>100-0</b>
White Cedar.....	159,476	87,681	0 55	33-0	145,659	76,673	0 63	37-2
Red Cedar.....	25,000	12,875	0 51	5-2	95,000	70,567	0 74	24-3
Jack Pine.....	25,616	14,821	0 58	5-3	66,954	53,137	0 49	17-1
Tamarack.....	31,545	19,196	0 61	6-5	27,232	13,806	0 51	7-0
Hemlock.....	52,763	23,426	0 44	10-9	19,563	7,427	0 38	5-0
Oak.....	2,925	2,391	0 82	0-6	14,760	13,044	0 88	3-8
Spruce.....	24,636	10,292	0 42	5-1	8,000	2,800	0 35	2-0
Douglas Fir.....	156,930	68,032	0 43	32-5	5,982	2,439	0 41	1-5
Elm.....	90	157	1 74	*	3,348	1,981	0 59	0-9
Western Larch.....					2,512	1,889	0 75	0-6
Hard Pine.....	4,200	2,940	0 70	0-9	1,995	1,106	0 55	0-5
Beech.....					152	152	1 00	*
Maple.....					61	61	1 00	*
White Pine.....	181	364	2 12	*				

\* Less than one-tenth of one per cent.

While the electric railways in Canada in 1913 purchased only two per cent of the ties, they paid the highest average price for their material.

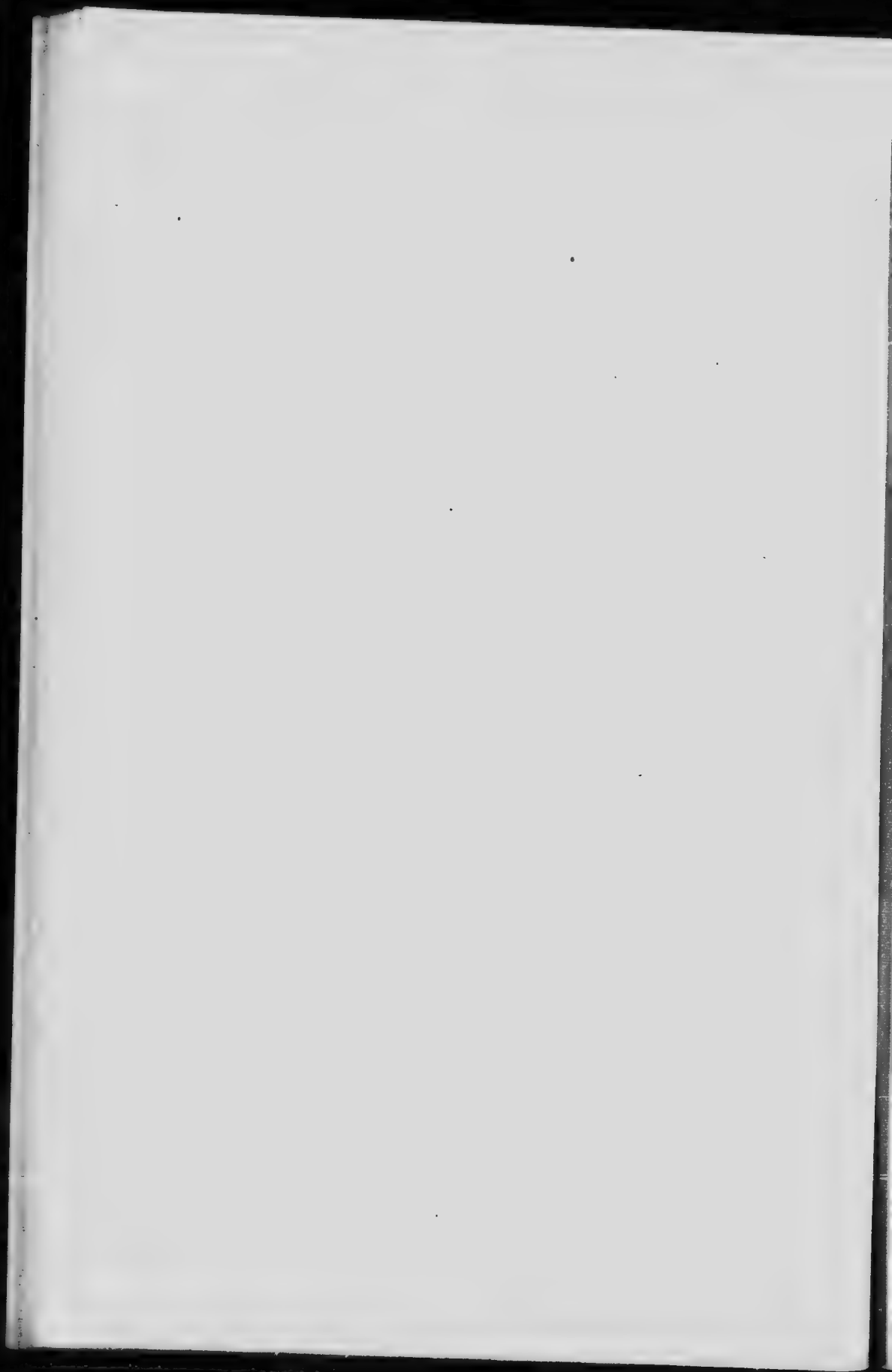
The total for 1913 was a decrease of 19-1 per cent from 1912. The two cedar species in this class formed together three-fifths of the total, and jack pine, which was the most important wood used by the steam railways, was of only secondary importance. As a general rule the more durable native woods

were purchased by these companies and the treated ties formed less than one per cent of the total. Oak and cedar ties were imported in the largest quantities, together with all the hard pine, beech and maple. Of the oak ties reported 9.3 per cent were treated, as were all the imported beech and maple ties.

The only western species reported were red cedar, Douglas fir and western larch. These companies paid, on an average, 16 cents a tie more than the steam railways. This price was an increase of 8 cents over that of 1912, increasing with the cedars and with oak. All the other woods showed decreases in average cost.

#### PRESERVATIVE TREATMENT.

In Canada in 1913 about 10.0 per cent of the cross-ties purchased by both classes of railways were given a preservative treatment to retard decay. The practice is a fairly recent one, as is seen by the fact that in 1910 practically no ties were treated at all, and that the percentage of treated material has increased steadily since that time. The treatment, under present market conditions, is most profitable when applied to the harder, stronger woods that if used untreated would decay before the end of their mechanical life.



## **A P P E N D I C E S**

**APPENDIX 1.—Directory of Sawmills in Canada.**

**APPENDIX 2.—List of Active Canadian Pulp Mills.**



## APPENDIX No. 1.

### DIRECTORY OF SAWMILLS IN CANADA.

NOTE.—The manufacturers whose names appear in this list are those from whom replies have been received for this bulletin as to their lumber production for the year 1913. No attempt has been made to separate mills not operating during the year from those in actual operation. Names prefixed by an asterisk (\*) are those of firms that manufactured 20,000,000 feet, board measure, of lumber in 1913.

#### ONTARIO.

Ackert, J. H., Holyrood.  
Adair, W. J., Black Bank  
Ainslie, J. S., & Bros., Comber  
Aitchison Bros., Hillsideview  
Allan, W. T., Rylstone  
Allan, Wm., & Son, Perth  
Allen, John J., Mount Irwin  
Alton, Geo. H., Appleby  
Ament, P., Brussels  
Ament Bros., Seaforth  
Anderson, C. G., Lumber Co., Ltd., Toronto  
Anderson, James, Chesley  
Anglin, Frank, Brewer's Mills  
Anglin, S., & Co., Kingston  
Appleby, R. M., Scotia  
Archer, Edward, Fowler's Corners  
Armstrong, P. A., Milberta  
Ashby, Chas., & Son, Havelock  
Ashcroft, John, Howden Vale, via Warton  
Ashley, Albert, Manitowaning  
Atchison & Co., Cornwall  
Austen, J., & Sons, Kinmount  
Austin, A. H., Stanley  
Austin & Nicholson, Chapleau  
Avonton Saw Mill, Avonton  
Ayton Saw & Planing Mill, Ayton  
Babeock, John H., Odessa  
Backhaust, John, Port Rowan  
Badour, L. J., Ferguson's Falls  
Baechler, Chas., Kinloss  
Baechler, Peter J., Sarnia, (also Widdifield)  
Bailey, A. & W. J., Hagarville  
Bailey, Geo. E., & Son, Badjeros  
Baird, H., & Co., Markdale  
Baird Bros., Plattsville  
Baker, Alexander, Pendleton  
Baker, Ira W., Cashtown  
Ball, J., Baltimore  
Barnes, W. G., Green River  
Barr, John H., Cobden  
Barrowclough, Elijah, Wesleyville  
Barry, Walter, Clay Bank  
Bartholomew, Henry, Vanessa  
Bartholomew, John, & Son, Stouffville  
Batman, J. T., Shegindah  
Baxter, R. W., Chatham  
Beach, F. W., Iroquois  
Beach, M. F., & Co., Winchester  
Beard, Marshall, Vandeleur  
Beck, Chas., Mfg. Co., Ltd., Penetanguishene  
Becker, Conrad D., Wellesley  
Becking, Wm., Tecumseh  
Bell, E., & Sons, Gibson  
Berger, J. J., & Co., New Hamburg  
Berry, Capt. S. & W. J., Providence Bay  
Bigras, Alex., Hanmer

#### ONTARIO—Con.

Binkle, Ph., Neustadt  
Bird, Andrew, Coe Hill  
Bishop, A., & Co., Fort William  
Bishop, W. S., Kimberly Co. Grey  
Bissonnette, Alex., The Brook  
Black, John, & Sons, Brechin  
Blackmore, John, White Hall  
Blackwell, George, Westmeath  
Boegel, Mrs. Bertha, Linwood  
Bogart, N. B., Ufford  
Bolton Bros., Portland  
Bonter, Wm., & Sons, Marmora  
\*Booth, J. R., Ottawa  
Booth, Wm. J., Earlton  
Booth & Shannon, Biscotasing  
Borland, George, & Son, Coldwater  
Bousfield, G. E., Milton West  
Bowen Bros., Castleton  
Bowman, D. M., Floradale  
Bowman, Levi M. B., Waterloo  
Boyd, Caldwell & Co., Lanark  
Brandt, Albert, Burk's Falls  
Brant & Courvoisier, Maganatawan  
Bray Lumber Co., Powassan  
Briese, H. W., Ullswater  
Brigham, Henry, Allan Park  
Briscoe, W. L., Killaloe  
Brounell, John, Bolger Bridge  
Brown, A., Godfrey  
Brown, Alex., Chatsworth  
Brown, H. J., & Son, Marksville  
Brown, W. J., Warkworth  
Bryant, J. H., Minden  
Bryce, E. A., Springfield  
Budd, J. W., Budd's Mills  
Bundscho, Jacob, Milverton  
Burn, J. R., Janetville  
Burrows, Albert D., Eden Mills  
Burtch, Thos., Sundridge  
Busch, H. L., Lovering  
Butler, J. E., & Son, Vittoria  
Buttermore, Wm., Merrickville  
Buttrel, Geo., Fernoy  
Cameron, H., Canonto  
Campbell, Wm. B., Campbellcroft  
Campbell & McNab, Douglas  
Campsall, J., Wilson, Harrowsmith  
Canada Iron Corp., Ltd., Midland  
Canada Pine Lumber Co., Ltd., Hamilton  
Canada Wood Specialty Co., Orillia  
Canadian Handle & Lumber Co., London  
Canadian Handle Mfg. Co., Ltd., Strathroy  
Canboro Milling Co., The, Canboro  
Canon Lake Lumber Co., McIntosh (Head Office, Winnipeg.)  
Card, Joseph, Mountain Grove

## ONTARIO—Con.

Carew, John, Lumber Co., Ltd., Lindsay  
 Carkner, D., & Co., Kenmore  
 Carnegie Milling Co., Port Perry  
 Carson, N. E., Cape Rich  
 Carter, James, Kagnawong  
 Cavendish Lumber Co., Peterborough  
 Chambers Lumber Co., Ltd., Rydal Bank  
 Chandler-Jones Lumber Co., Ompah  
 Charbonneau, G., Hamner  
 Chenier, A., Chelmsford  
 Chesterfield Lumber Co., Ltd., Sterling Bay  
 Chew, Manley, Midland  
 Chew Bros., Midland  
 Chisholm, J. M., Roslin  
 Christie, George, Nolasu  
 Christie, Robert, Chesley  
 Clark, Geo. V., & Son, Chapman  
 Clark, P. P., St. Ola  
 Clarke, Thos. H., Windermere  
 \*Cleveland-Sarnia Saw Mills Co., Ltd., Sarnia  
 Clingen, A. D., Martintown  
 Clyde Forks Lumber Co., Caldwell's Mills  
 Collings, F. H., Langton  
 Collingwood Hardwood Lumber Co., Collingwood  
 Collins Inlet Lumber Co., Toronto  
 Collins, John, Honora  
 \*Colonial Lumber Co., Ltd., Pembroke  
 Colterman & Doney, Dacre  
 Conger Lumber Co., Ltd., Parry Sound  
 Conklin, David, Kingsville  
 Conklin, J. T., Langton  
 Connell, M., Torrance  
 Connell, Thos. A., Spencerville  
 Connolly, W. A., South River  
 Cook, Chas. W., Creighton  
 Cook, Frank, Zephyr  
 Cook Bros., Devlin  
 Cooper, Angus, Dunn's Valley  
 Cooper, H. Y., Bloomfield  
 Corbett, E. C., Verschoyle  
 Corner, Wilnot, Peterlaw  
 Cottrill, B., Huntsville  
 Coultres Bros., Forest  
 Coultis, Geo., and Sons, Thedford  
 Courtney, Robt. J., & Sons, Omamee  
 Craik Bros., Crampton  
 Crawford, Murray, Campbellville  
 Crockford, E. G., McKellar  
 Croft Lumber Co., The, Huntsville  
 Crossing Lumber Co., Minaki  
 Culhan Bros., Stayner  
 Cybulske, Joseph, Killaloe  
 Daoust & Belanger, Alfred  
 Darling, Thos., Callender  
 Davey, Bros., Highland Grove  
 Davidson, D., Trent Bridge  
 Davidson's Mills, Brighton  
 Davies, Joseph, Locksley  
 Dawson, A., Chesley  
 Day, Robt. W., Balsam  
 Dayman, E., Lynden  
 Dean, J. C., Tobermory  
 Dease, J. A., Port Rowan  
 Deller, Wm. & Albert, Thorndale, R.R. 4  
 Derbyshire, Herbert, Westport  
 Devon Lumber Co., Ltd., Ottawa  
 Diamond, H. & Chas. S., Dorking  
 Dike & Sons, Mt. Albert  
 Donnelly, J. J., Pinkerton  
 Donovan, Daniel, Denbigh  
 Drader, W. M., Chatham  
 Drummond, J. F., Clayton  
 Dryden Timber & Power Co., Dryden  
 Dryden, W. C., Harriston  
 Duff, John, Roseneath  
 Duff & Stewart, Bluevale  
 Dunbar, George, Midford

## ONTARIO—Con.

Dunbar, Wm., Sundridge  
 Dunlop, W. H., Kintore  
 Dupuis, Peter, Purdy  
 Durham Furniture Co., Ltd., Durham  
 Eddy Bros. & Co., Ltd., Blind River  
 Edwards, Wm. B., Belmore  
 \*Edwards, W. C., & Co., Ltd., Ottawa  
 Ellery, Wm., Fenelon Falls  
 Elliott, James, Scotland  
 Elliott, J. R., Vankoughnet  
 Ellis, David, Castleton  
 Ellis, Mark, Norland  
 Empey, Arthur L., Empey  
 Ethier, E., Dalkeith  
 Evans, Francis, Port Ryerse  
 Fader, Joseph, & Sons, Mill Hill  
 Fensom, R., Nairn Centre  
 Fenwick, W. S., & Sons, Enterprise  
 Ferguson, Alexander, Oil Springs  
 Ferguson, Alexander, Rocky Saugeen  
 Ferguson & Englehart, Bannockburn  
 Ferguson & McFadden, Tomiko  
 Ferguson Bros., New Liskeard  
 Fesserton Lumber Co., Fesserton  
 Fetterly, Lindsay, Vars  
 Fiegehen, Reuben, Collingwood  
 Finlay & Anderson, Tory Hill  
 Firstbrook Box Co., The, Penetanguishene and  
 Toronto  
 Fischer, V., Ayton  
 Fisher, A., & Son, Paisley  
 Fisher, I. H., Dundas  
 Flummerfelt, John, Sandford  
 Ford, Wm., Staples  
 Forest Basket Co., Ltd., Forest  
 Forest, Jas., Iron Bridge  
 Forsyth, A. J., Burriss  
 Fortier, John L., Phillipsburg West  
 Foster, I. J., Pembroke  
 Fothergill, Edward, Beaverdale (Co. Grey)  
 Fowlds Co., Ltd., The, Hastings  
 Franklyn, John, Southwood  
 Fraser & Philips, Heaslip  
 Fraser & Co., Ottawa  
 Freiburger, Jos., Greenock  
 Fretz & Wise, Jordan Harbor  
 Fry, Wm. J., Kirkfield  
 Fullerton, John L., Kynoch (Algoma District)  
 Fulton, Robt., Rockwood  
 Fulton, Walter, Fulton Mills  
 Gagnon, M., Monkland  
 Galvin, W. J., Almonte  
 Gammond, Fred., Slate River Valley  
 Gardiner, B. F., Thornloe  
 Geddes, Walter, Dalhousie Lake  
 \*Georgian Bay Lumber Co., Waubaushene  
 Gettler, J. R., Motherwell  
 Gill & Fortune, Trenton (also Gilmour)  
 Gillies, D. H., & Son, London  
 Gillies, Robt. & P., Exeter  
 Gillies, Sam., & Sons, Ailsa Craig  
 Gillies, Wm., Tobermory  
 \*Gillies Bros., Braeside  
 Glass, John, Millford Bay  
 Goetz, J. K., Dashwood  
 Golden & Waller, Aspdin  
 Gole, George, Breslau  
 Goodwillie, John A., Welland  
 Gordon, A. W., I. Amable  
 \*Gordon, G., & Co., Ltd., Cache Bay  
 Gordon, Wm., Bridge End  
 Graham, J., Elmvale  
 Graham, R. L., Silver Water  
 Grant, Peter, Bobcaygeon  
 Grant, P. J., & Kennedy, New Liskeard

ONTARIO—Con.

Gratton, F., North Bay  
 Graves, Bigwood & Co., Toronto  
 Greer, John, Sucker Lake  
 Grieve, John, Parkhill  
 Gropp Bros., Penetanguishene  
 Gunter, R. H., McCræ  
  
 Hagar, A., & Son, Jessop Falls  
 Haines, A. T., Cheltenham  
 Hall, Joel, Silver Hill  
 Hallman, J. C., New Dundee  
 Hambly, T. C., Tory Hill  
 Hamilton, Wm., Silver Lake  
 Hamilton & Prout, Forest  
 Hamilton Bros., Glen Huron  
 Hardie, James, Hurdville  
 Hare, Robert, MacLennan  
 Harmer, R. J., Fullarton  
 Harris, Henry, Waubamick  
 Harrison, Sons & Co., Ltd., Owen Sound (also  
 Algoma Mills.)  
 Harrison, Robert, Orangeville  
 Harrison, W. C., Norwood  
 Harvey, R. G., & Sons, Lyndhurst  
 Hatton, W. H., Ivy  
 Hawes, R. A., Otterville  
 \*Hawkesbury Lumber Co., Ltd., Hawkesbury  
 Hasen, Mathias, Port Rowan  
 Heard Bros., Bridgenorth  
 Heaslip Lumber Co., Heaslip  
 Henderson, David A., Nassagaweya  
 Henderson, James, Branchton, R.R. No. 2  
 Hepworth Mfg. Co., Ltd., The, Hepworth  
 Hermiston, Michael, Dayton  
 Heron, August, Barry's Bay  
 Herron, J. & J., Herron's Mills  
 Hickox, Chas., Charlton  
 Hicks, N. A., Webbwood  
 Highland Lumber Co., Ltd., Berriedale  
 Hill, Lewis, (Hill Lumber Mill) Birkendale  
 Hocken Lumber Co., Otter Lake  
 Holcomb & Co., Little Rapids  
 Holden, Wm., Starrat  
 Holgate, C. H., Moira  
 Hope & Elmhirst, Lang  
 Hope Lumber Co., Thessalon  
 Horton, Eli, Welland Jct.  
 House, John, Courtland  
 Howell, L., & Son, McMurrich  
 Howell, Lorenzo, & Son, Yearley's  
 Howes, John, Harriston  
 Howey, J. C., Nanticoke  
 Howson & Lawson, Auburn  
 Hubbell Bros., Bancroft  
 Huffman, Paul, Northfield Centre  
 Hughes, Wm., Marmora  
 Hugli, Fred., Golden Lake  
 Hummel, Thos., Trout Creek  
 Hunter, A., & Sons, Gooderham  
 Huntsville Lumber Co., Ltd., Huntsville  
 Huntville Syndicate, Ahmic Harbor  
 Hutchinson, W. J., Caledon East  
 Hyslop & Sons, Greensville  
  
 Ilan, John, Matawatchan  
 Innes, L., & Sons, Richmond Hill  
 Ireland, James, Riverview R.M.D.  
  
 Jackson, A., Kendal  
 Jackson, John, Seguin Falls  
 Jackson, S., & Son, Wagarville  
 James Bay Lumber Co., Gowganda  
 Jamison, John, Barrie  
 Jones, C. B., & Co., Orillia  
 Jones, H., Delaware  
 Jeffrey, John, & Co., Oranmore  
 Jervis, John, & Sons, Dorchester Station  
 Joanis, J., Rockland

ONTARIO—Con

Johnston, Fred., Arkona  
 Johnston, Hunter & Crawford, Warton  
 Johnston, W. D., Esquesing  
 Johnston, W. H., Pefferlaw  
 Jones, J. H., Thamesford  
 Julien, Geo., Feversham  
  
 Kaufman, Jacob, Rousseau Falls  
 Kaufman, L., Shawanaga  
 Keenan Bros., Ltd., Owen Sound  
 Keeso, John, Listowel  
 Kelly, Thos., Roseneath  
 Kelly, W. B., Lumber Co., Bridgenorth  
 Kendalk, R. F., Kenora  
 Kennedy, Floyd F., Mt. Elgin  
 Kent, Wm. J., Pevensey  
 Kilusky, Frank, Bancroft  
 Kitchen, Thos., & Sons, Lovering  
 Knapp, J. M., Anten Mills  
 Knight Bros., Burk's Falls  
 Konkle, Geo. E., Beamsville  
 Krause, Albert, Williamsford  
 Krug Bros. & Co., Ltd., Chesley  
 Kyle, P., (Estate of), Burritt's Rapids  
  
 Ladouceur, Chas., Sowerby  
 Laffleur, P. J., Earlton  
 Lake Rousseau Lumber Co., Bankview  
 \*Lake Superior Paper Co., (Saw Mill Dept.)  
 Sault Ste. Marie  
 Laking, Wm., Lumber Co., Ltd., Haliburton  
 Langford, Abner, Granton  
 Langford, B., Lucan  
 Laroque, A., Embrun  
 LaRue, S., Mountain  
 Laviolette, Chas., Camel Chute  
 Laviolette, Geo., Greenfield  
 Lawrence Bros., Ltd., Canoto  
 Lee, Jas., Ben Allen  
 Legree, Austin, Khartum  
 Leushner, F. P., Waubamick  
 Light, R., Napanee  
 Lindsay, Adam, Renfrew  
 Little Current Lumber Co., Little Current  
 Lloyd, J. Alfred, Pottageville  
 Locke, Thos., Campbellford  
 Louks & Thorne, Hamilton  
 Lounsbury, R. E., Eastwood  
 Lowery, J., Parham  
 Lucknow Table Co., Lucknow  
 Ludgate, James, McKellar and Parry Sound  
 Lusty Lumber Co., Ltd., Rodney  
 Lynch & Ryan Lumber Co., Westwood  
  
 McAllister, George, Bloomingdale  
 McAllister Lumber Co., Ltd., The James,  
 Chute à Blondeau  
 McAlpine, Bruce, Marshville (also Welland)  
 McAmmond, W., Maple Island  
 McArthur, S., Almonte (also Ramsay)  
 McArthur Bros., Murillo  
 McCull & Co., St. William's  
 McCamus & McKelvie, New Liskeard  
 McCann, E. A., & Sons, Dorchester Station  
 McCauley, Hugh, Etyville  
 McCrae, James, Trowbridge  
 McCreary, James, Sr., Geneva  
 McDonald, Alfred, (Estate of), Peterborough  
 McDonald, J. E., Port Rowan  
 McEachern, D. J., Alvinston  
 McEwen Bros., Bayfield  
 McGibbon Lumber Co., The, Penetanguishene  
 McHenry, I., Sundridge  
 McInnis, F. C., Leeburn  
 McKay, Angus, Dorset  
 McKay, John, Lovat  
 Mackie, A. T., Pembroke  
 McKillop, A., & Sons, Ltd., West Lorne

## ONTARIO—Con.

McKinnon, D. A., Maxville  
 McLachlan Bros., Arnprior  
 McLachlin, Wm., Maganatawan  
 McLarty, Robt., McLarty  
 McMartin, Howard, Berwick  
 McMartin, Wm. T., Chesterville (R.R. No. 1)  
 McMillan, Wm., Dryden  
 McNair, Donald, & Son, Whitewood Grove  
 McNaughton, John R., Dominionville  
 McNeill & Co., Sturgeon Falls  
 McPherson, D. J., South Lancaster  
 McQuillan, A., Webbwood  
 McTavish, Archie, Cedarville  
 Macck, John, & Sons, Wattenwye  
 Mallard, W. J., Oxenden  
 Malloy & Bryans, Haliburton  
 Manitoulin Lumber Co., Ltd., Windsor  
 Maple Lake Lumber Co., Massey Station  
 Marceau, J. H., North Bay  
 Marshall, John M., Powassan  
 Marshall, Robert, Washago  
 Marshall, Stephen, Lefroy  
 Marshall & Arnett, Sprucedale  
 Martin, J. L., Kars  
 Martin & Snelgrove, Milton  
 Martin Lumber Co., The, Hillsdale  
 Mather, D. L., Kenora  
 Maxwell, David, & Sons, St. Mary's  
 Mennard, Frank, Sturgeon Falls  
 Metcalf, Fred W., Redwing  
 Metcalf, John T., Redwing  
 Michener, Wm., St. Ann's  
 Mickle, Dymont & Sons, Gravenhurst  
 Midland Lumber Co., Midland  
 Milburn, Chas., & Son, Desboro  
 Mildmay Electric Light & Lumber Co., Mildmay  
 Miller, A. O., Avonmore  
 Miller, F. A., Bruce Mines  
 Miller, J. W., Walsh  
 Mills, Alex., Merriekville  
 Mills & Wynn, Woodham  
 Milne, John H., Agincourt  
 \*Milne, Wm., & Son, Ltd., Trout Mills  
 Milne & Bros., Lefroy  
 Mitchell, Alfred, Powassan  
 Mitchell Bros., Berkeley  
 Mitchell Bros., Cockburn Island  
 Mogk, Henry, Bornholm  
 Mollins, T. E., Burgessville  
 Monger, Oliver, Mt. Brydges  
 Moore, Arthur, Falkenburg  
 Moore, Edward, Frogmore  
 Moore, T. J., Warton  
 Moote, S. S., Dunnville  
 Morton, T., Stapleton  
 Moulthrop Lumber Co., John Island  
 Mountjoy Lumber Co., Timmons  
 Mullen, John, Lucknow (Box 222)  
 Mulloy, H. S., South Wilberforce  
 Mundell, J. C., & Co., Elora  
 Munroe, I. & E., Perth (R.M.D. No. 3)  
 Murphy, Chas., Steenburg  
 Murphy, J. E., & Co., Tobermory  
 Murphy Bros., Kenora  
 Murray, J. C., Katrine Station  
 Muskoka Lakes Lumber Co., Ltd., Gravenhurst  
 Muskoka Wood Mfg. Co., Huntsville  
 Mustard, John B., Brucefield  
 Mustard, W. A., Bayfield  
 Mutton, W. W., Colborne  
 Neilson, R., & Son, Proton (Co. Grey)  
 Newman, Nelson, Uphill  
 Nichols, W. A., Carleton Place  
 Niebergall, George, & Son, Parry Sound  
 North American Bent Chair Co., Ltd., Owen Sound  
 Northern Construction Co., Fort Frances  
 Noxell, Wm., Komoka

## ONTARIO—Con.

O'Brien, Michael J., Renfrew  
 Oldrieve, G. A., Wallacetown  
 Oldrieve, John, Glenoe  
 Olin, Levi, Novar  
 Oliver, A. H., & Co., Udney  
 Olmstead Bros., Walter's Falls  
 O'Neil Co., Kenilworth  
 Owen, Edward, Richard's Landing  
 Palmer, D. J., Elmhedge  
 Paris, James, Whitelake  
 Parish, W. G., Athens  
 Parker, R., & Sons, Uno Park  
 Parker Bros., Parkersville  
 Parks, Frank W., Cooper  
 Patrick, George A., & Son, Delaware  
 Peacock, Chas. H., Coe Hill  
 Pearce Co., Ltd., Marmora  
 Pedwell, Chas., Lionhead  
 Pedwell, E. C. M., Thornbury  
 Pedwell, Wm., Brookholm  
 Peldo, H., Nolalu  
 Pembroke Lumber Co., Ltd., Pembroke  
 Penman, Jas., Middleville  
 Perry, Samuel R., Woodstock (R.R. No. 5)  
 Persall, John, & Co., Caledonia  
 Peter, Wm. (Estate), Parry Harbor  
 Peterboro Lumber Co., Ltd., Peterborough  
 Phillips, Jos. H., Burnt River  
 Phillips, Thos. W., Eugenia (Co. Grey)  
 Pickard, A. E., Warton  
 Pierson, John, Stevensville  
 \*Pigeon River Lumber Co., Port Arthur  
 Pilon, F., Verner  
 Place, F. D., Algonquin  
 Playfair, Jas., & Co., Midland  
 Playfair, John E., Playfair  
 Poaps, R. A., Leonard  
 Poisson, E. C., Belle River  
 Pollock & Sons, Englehart  
 Poncher, Daniel, Poncher's Mills  
 Potter, Wm., & Son, Beeton  
 Potts, Jas., & Sons, McIntyre  
 Powassan Lumber Co., Powassan  
 Prentice, John L., Minden  
 Presley, Robert, Carleton Place  
 Pretty, Jas., & Son, Sandusk  
 Prince Bros., Barry's Bay  
 Pringle, John F., & Co., Charlton  
 Prout, W., Castleton  
 Quade, A. C., Quadeville  
 Quade, A. F. F., Quadeville  
 Quance Bros., Delhi  
 Quickfall, W. C., Glen Allan  
 Quincy-Adams Lumber Co., Langford Mills  
 Quinn & Keown, Dwight  
 Quirt, Chas. C., Midford  
 Ransford, John, Clinton  
 \*Rat Portage Lumber Co., (Head Office, Winnipeg)  
 Rathbun Lumber Co., Deseronto  
 Rattcliffe, W., & Pleben, John, Ringwood  
 Ratz, J. E., & Co., Wesley  
 Ratz, John, & Sons, Ahiva  
 Ratz, W. K., Restoule  
 Readhead, John, Lowville  
 Reid, Colin, jr., & Bros., Bothwell  
 Reid, Jas. H., Bear Lake  
 Reid, J. Miles, West Huntingdon  
 Reid, W. I., Co., The, Ayr  
 Reid Bros., Lavant Station  
 Renwick, Robert, sr., Dromore  
 Richards, Harry, Dacre  
 Richardson, Jas., Kerwood  
 Richardson, U., Elora  
 Richardson, Wm., Axt Lake  
 Riddell, Andrew, Hopeville

ONTARIO—Con.

Rideau Lumber Co., Ottawa  
 Riordon Paper Mills, Ltd., Hawkesbury  
 Rixon, Ainslie, Stoddart Co., Ltd., Owen Sound  
 Robinson, Richard, Waterford  
 Rock Lake Lumber Co., Dryden  
 Rogers Bros., Minden  
 Romlewski, John, Barry's Bay  
 Ross, Jas. C., Markdale  
 Rosedale Saw Mill Co., Ltd., Toronto  
 Ross, L. A., Cornwall  
 Ross & Taylor Co., Exeter  
 Rous, C. A., & Sons, Lynden  
 Rowe, W. H., Riceville  
 Ruppel, John H., Kurtzville  
 Rutledge, W. E., Newmarket (Box 563)  
 Ruttie, Chas., Udon  
 Ryckam, J. E., Charlton  
 Rydall, John, MacLennan  
  
 Sadler, Wm., Staffa  
 St. Mary's Wood Specialty Co., St. Mary's  
 Sample, Robert, Perth  
 Sampson, Frank, jr., Bonfield  
 Sanderson & Armstrong, Boston  
 Saunders, S., & Son, Watford  
 Saunders Bros., Sutorville  
 Sayers, Frank F., Rockwood  
 Schell, M. & W., Woodstock  
 Schnitzler, Mrs. A., Lauriston  
 Schram, Oliver, Hymers  
 Scott, W. B., Millford  
 Scripture, J. C., Coe Hill  
 Seaman, N. D., & Sons, Sauble Falls  
 Seebach, Louis, Mitchell (R.R. 2)  
 Seguin, Albert, North Bay  
 Seibert, J., Southampton  
 Shannon, P., & Co., Massey  
 Shaver, A. M., Ancaster  
 Shaw & Earle, Hallville  
 Shea, John L., Ufford  
 Sheard, Wm. J., Southampton  
 Shepard & Morse Lumber Co., Ottawa  
 Shepherd, John A., Scotland (R.R. No. 3)  
 Shepley, Reuben S., Echo Bay  
 Sherriff, J. H., Dunsford  
 \*Shevlin-Clarke Co., Ltd., Fort Frances  
 Shier, J. D., Lumber Co., Ltd., Bracebridge  
 Shirk, Arthur, White Hall  
 Shirk, Benj., & Son, Humberstone  
 Shirk, David S., & Sons, Sherston  
 Shirra Milling Co., Caledonia  
 Shortreed Bros., Hillsdale  
 Shortreed Lumber Co., Kearney  
 Shumaker, Valentine, Fisherville  
 Simpson, Thos., Dunchurch  
 Slack, P. Edward, Brinsley  
 Slade, F. J., Fenella  
 Smith, A. Sidney, Port Sydney  
 Smith, C., & Sons, Durham  
 Smith, D. C., Broadbent  
 Smith, F. A., Co., Charlton  
 Smith, John, Adley  
 Smith, John, & Sons, Callender  
 Smith, Sam., Port Rowan  
 Smithson, C., Bennie's Corners  
 Snider, J. W., New Liskeard  
 Snider, Jesse, & Son, Hillview  
 Snyder, Uriah, New Dundee  
 \*Spanish Mills Co., Ltd., Spanish Mills  
 Spears & Lauder, Burk's Falls  
 Spencer, Cornelius, Ursa  
 Sprucedale Lumber Co., The, Sprucedale  
 Stacey, W. J., Wooler  
 Standard Chemical Iron & Lumber Co. of Canada,  
 Ltd., Toronto  
 Standard Hardwood Lumber Co., Owen Sound  
 Stanton, James, Portland  
 Staples, R., Franklin

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ONTARIO—Con.

Stearns, M. L., & Sons, L'Original  
 Steinmann, N., Josephsburg  
 Stephen, Anthony L., Loring  
 Stephenson & Payne, Appin  
 Stewart, Hugh, Hopetown  
 Stewart, John, Waba  
 Stirtzinger, John W., Fenwick  
 Stone Lumber Co., Marksville St. Joseph's Island  
 Stott, Wm., Wyevalle  
 Stoutenburg, P., Collingwood  
 Suddaby, Thos. W., Port Lock  
 Sutherland-Innes Co., Ltd., Chatham  
 Sweitzer & Co., Shipka  
  
 Taplin, E. W., Novar  
 Taylor, George H., Starrat  
 Taylor, Lumber Co., The Fred., Maganatawan  
 Taylor, Orric, Massie  
 Taylor, Scott & Co., Palmerston  
 Taylor, Thos., Ancaster  
 Tench Estate, Waterford  
 Tennant, George, Bracebridge  
 Tett, J. P., & Bros., Bedford Mills  
 \*Thessalon Lumber Co., Nesterville  
 \*Tinder Bay Lumber Co., Midland  
 Todd, F. G., St. Helen's  
 Todd, James, jr., Burritt's Rapids  
 Toins, George, Bognor  
 Tomstown Lumber Co., Tomstown  
 Train, Amos, New Flos  
 Treleven, Thos. H., Lucknow  
 Tripp, Guy G., Franklin  
 Troup, George, Sherston  
 Trout Creek Lumber Co., Nipissing  
 Truax, R., & Co., Walkerton  
 Trussler Bros. Ltd., Trout Creek  
  
 Umpherson, James, Lavant Station  
 Utterson Lumber Co., Utterson  
  
 Vance, J. J., Cottam  
 Vankleek Hill Mfg. Co., Ltd., Vankleek Hill  
 Varrin, James, Griffith  
 Vincent, P., North Lancaster  
 Voght, George, Adamsville  
  
 Walker, A. T., Saw Mill, The, Markdale  
 Walker, James, Huntsville  
 Wallace, D. E., Thamesville  
 Warren Lumber Co., Sellwood  
 Watson, John, Caesarea  
 Watson, Neil, Mull  
 Watson & Taylor, Ridgetown  
 Webster, Jesse, Elmvalle  
 Weeks, W. H., & Son, Escott  
 Weiler, Christian, & Son, Formosa  
 Weismiller, Herman, Bracebridge  
 Welsh, Thos., Hensall  
 West & Peachey, Simcoe  
 Westcott, Wm. Henry, Ailsa Craig (R.R. No. 1)  
 Wettlaufer, Louis, Ayton  
 Whiche, C. E., Colpoys Bay  
 White, James L., Heathcote  
 Widdifield, W. P., Siloam  
 Williams, J. M., Parry Sound  
 Williamson, John, Stanley  
 Williamson, John, Stockdale  
 Willows, Colin, Carleton Place  
 Wilson, Robert, Bar River  
 Wilson Bros., Sundridge  
 Winters, John, Hogan  
 Wise, Henry, Craighurst  
 Wise, Henry, St. Catharines  
 Witheringshaw & Parker, Hymers  
 \*Wolverine Cedar & Lumber Co., Sault Ste. Marie  
 Wood, W. S., Oxford Centre  
 Woodcock, John E., Tamworth  
 Wood's Mills Co., Smiths Falls

## ONTARIO—Con.

Yates, G., Baldwin

Young, Thom., Sangster

Zimmerman Bros., Tavistock

## QUEBEC.

Agagnier, Jos. & A., St. Malo Station  
 Ainsley, Benj., & Sons, Thetford Mines  
 Alarie, Chas. & Eugene, Brébeuf (Terrebonne)  
 Alexander, Andrew, Kazabazua  
 Alie, Mrs. Ernest, River Joseph  
 Allan, Jas., Kinnear's Mills  
 Allard, Tel., L'Avenir  
 Allard, Eld., Courcelles  
 Amyot, E., & Son, Wilson's Corners  
 Angers, L. Nap., St. Norbert  
 Arcand, C., & Fils, Portneuf  
 Argenteuil Lumber Co., Ltd., Marin Heights  
 Argue, H. T., Shawville  
 Armstrong, J. H., St. Adolphe de Howard  
 Arseneau, J. B., St. Valère de Bulstrode  
 Asbestos Corporation of Canada, Thetford Mines  
 Atkinson, Henry, Etchemin  
 Atwell, Volny G., Hansonville  
 Aubin, J. Octave, Hébertville  
 Aubin, Wilfred, St. Donat de Montcalm  
 Auchair, Desiré, Rivière à Claude  
 Audet, George, St. Edouard de Frampton  
 Audet, Isaac, La Présentation (St. Hyacinthe)  
 Audet, Jos., St. Gédéon  
 Audet, Samuel, Saints Anges  
 Auger, Cleophas, St. Croix (Lothinière Co.)  
 Auger & Son, St. André, Kamouraska

Baie St. Paul Lumber Co., Baie St. Paul  
 Baillagion, Octave, Buckland  
 Baillie, Odilon, Baie St. Paul  
 Baillie, W. & J., Aylmer  
 Baldwin, W. R., Baldwin's Mills  
 Baribeau, Hormisdas, St. Paulin  
 Baril, Napoleon, Tingwick  
 Barter & Bishop, Marblenton  
 Bussinet, Chas., St. Jean de Matha  
 Bazinet, D., & Freres, St. Hugues  
 Beauce Pulp and Lumber Co., Quebec, (Mills at Scott Junction)

Beauchemin, Philippe, St. Paulin  
 Beauchemin & Freres, St. Elie de Caxton  
 Beaulieu, Jos., Mistassini  
 Beaudoin, Avila, Laurentides  
 Beaudoin, David, St. Ludger, Compton Co  
 Beaudoin, Jean, St. Veronique  
 Beaudoin, Jos., St. Hénédine  
 Beaudoin, J. L., Leeds (Mégantic Co.)  
 Beaudoin, Onesime, St. Agathe  
 Beaudou, T., Leeds Station  
 Beaudry, Adolphe, St. Beatrix  
 Beaulieu, Jos., Notre Dame de la Merci  
 Beaumont, F., Ste. Catherine  
 Beaumont, Jos., St. Augustin, Portneuf  
 Beaupre, Cyprien, St. Etienne des Gres  
 Beaulieu, Jos., North Stukely  
 Beausoleil, Jos., & Fils, St. Felix de Valois  
 Bedard, Jos., & Sons, Richmond  
 Bedard, Thos., St. Louis Ravignon  
 Bedford Mfg. Co., Bedford  
 Belaire, O., St. Adrien  
 Belanger, J. B., Ponsonby  
 Belanger, Narcisse, St. Jerome, Terrebonne  
 Belgo-Canadian Pulp Co., Shawenegan Falls  
 Benard, Delphis, Northfield Centre  
 Berbery & Boisly, St. Côme  
 Bergeron, Adolphe, Danville  
 Bergeron, Hercule, St. Leonard  
 Bergeron, Omer, St. Clothilde (Arthabaska)  
 Bergeron, Philippe, St. Fulgence

## QUEBEC—Con.

Bergeron, Zenon, St. Charles de Mandeville  
 Bergeron & Frere, Trottier, (St. Hélène de Chester)  
 Berlinguette, N., West Templeton  
 Bernard, Felix, St. Charles Caplin  
 Bernard, Henry & J. A., Carleton Centre  
 Bernard, Fra., St. Félicien  
 Bertrand, Maurice, Metcham Mills  
 Berube, Jos., L'Epiphanie  
 Besette, Jos. O., & Frere, La Conception  
 Bhercur, Wilbrod, St. Fidèle  
 Bilodeau, Antoine, St. Patrice de Beaurivage  
 Bilodeau, Louis, St. Sylvester  
 Bishop, Orran M., Bishop's Crossing  
 Bisson, F., St. Anastasie  
 Blais, Geo., Co., Ltd., St. Euphemie  
 Blanchette, Alexandre, Matane  
 Blanchette, Felix, West Wickham  
 Blanchette, Jos., L'Avenir  
 Boisjoly, Moise, Lanoraie  
 Boime, Hormisdas, North Stukely  
 Boissoneault, Jos., St. Jean d'Orleans  
 Boisvert, Zoel, St. Elphège  
 Bondu, Jos., Notre Dame du Pont Main  
 Bonin, D., Lanoraie  
 Bouchard, Domitien, L'Anse St. Jean  
 Bouchard, Elzeur, St. Irénée  
 Bouchard, Jos., Baie St. Paul  
 Bouchard, Jos., St. Eleuthère  
 Bouchard, Louis, Baie St. Paul  
 Boucher, Alexis, St. Paul de la Croix  
 Beaudreau, Z., West Brome  
 Bouffard, Jos., St. Léon de Standon  
 Boulanger, Ephrem, St. Isidore  
 Boulanger, Jos., St. Alexis des Monts  
 Boulet, Narcisse, St. Paul du Buton  
 Boulianne, Henry, Bon Desir  
 Bourget, Urie, St. Adrien de Ham  
 Bourque, Jno. L., Valcourt  
 Bourret, Raymond, St. Guillaume d'Upton  
 Boutin, Jos., St. Théophile  
 Bown, W. A., Lemoxville  
 Boyer, Jos., St. Louis Station  
 Breton, Francois, St. Nérée  
 Brishin, Chas. H., Vicars  
 Brochu, Jos., St. Benoit Labre  
 Brook, E. (See Highland Sawmill Co.)  
 Bronpton Falls Pulp & Paper Co., The, East Angus

Brouillard, Ovide, Carmel  
 Brouillette, Chas. G., Mansonville  
 Brown Bros., Danville  
 Bruneau, Felix & Zoel, Ste. Mclanie  
 Bruneau, Napoleon, St. Damien de Brandon  
 Brunelle, A., & Co., St. Rosaire  
 Brunette, Joseph, St. Thérèse de Blainville  
 Bugold, Wm., Maria  
 Burbank, E. R., Barnston  
 Bureau, Edouard, St. Romain  
 Burrill Lumber Co., Ltd., Three Rivers  
 Bussque, Jos., & Son, Touffe de Pins  
 B. & S. Lumber Co., Tartigon, (Matane Co.)

Call, L. M., Call Mill, West Brome  
 Cameron, Wm. H., Stornaway  
 Campbell, J. Arthur, & Co., Dalesville  
 Caron, Alph., L'Anse au Beaulieu  
 Carrier, Wilfred, Peribonka  
 Carufel, E., St. Elie de Caxton  
 Casavant, Pierre, Minerve  
 \*Cascapedia Mfg. & Trading Co., Little Cascapedia  
 Cass, L. O., Bulwer  
 Caswell & Mooney, Scottstown  
 Cayouette, J. Emile, Kirouac  
 Chabot, Edouard, Armagh  
 Chabot, Ferdinand, St. Justine  
 Chabot, H., Beaumont  
 Chabot, Philéas, Langevin  
 Chabot & Allaire, St. Zacharie

QUEBEC—Con.

Chadsey Lumber Co., Danville  
 Chaleur Bay Mills Co., Restigouche  
 Champagne, H., St. Cyrille de Wendover  
 Charbon, Albert, Paquetteville  
 Chapuis, W., St. Edmond  
 Charest, Pierre, Ste. Félicité  
 (de) Charette, Ed., Charette Mills  
 Charlemagne & Lac Ouaresau Co., Montreal  
 Château Richer Lumber Co., Château Richer  
 Chauvin, Antoine, Woburn  
 Chicoine, Octave, St. Marc  
 Chisholm, Malcolm, Lost River  
 Chouinard, J. H., St. Jean Port Joli  
 Chouinard & Collin Lumber Co., Ltd., Matane  
 Clark, H. H., St. Herménégilde  
 Clèche, Augustin, Beauce Junction  
 Clough, L. L., Ayer's Cliff  
 Copping, W., Joliette  
 Copping Bros., Rosebel  
 Cormier, Henri, Bécancourt  
 Cossette, Albert H., St. Narcisse  
 Côté, Euclide, Ste. Adèle  
 Côté, Jos., St. Joachim  
 Côté, Pierre, Ste. Sophie (Mégantic Co.)  
 Coupal, Adolphe, St. Jovite  
 Coupal, Theodore, St. Jovite  
 Courval, Dominique, Aston Junction  
 Couturier, Alphonse, St. Louis de Ha Ha  
 Couturier, Jos., St. George, Murray Bay  
 Craig, Wm., Stoneham  
 Cramer, W. A., Way's Mills  
 Cross, Freeman, Cascades  
 Cummings, A. H., & Sons, Coaticook  
 Cummings, M. N., River Desert  
 Dallaire, Pierre, Rivière au Doré  
 Damour, Jos., & Son, St. François de Whitworth  
 Dansereau, Adjutor, Lavaltrie  
 Dansereau, Geo., Grenville  
 Dansereau, J. H., Three Rivers  
 Danville Chair & Specialty Co., The, Danville  
 Dawson, S., & Sons, Mille Îles  
 Dea, Philippe, L'Anse à la Barbe  
 Delisle, Alphonse, Broughton Station (Beauce Co.)  
 Demers, Honoré, St. Samuel, Lac Mégantic  
 Demers, J. Telesphore, Rivière au Doré  
 Dennison, I. & J., Dennison's Mills  
 Denomme, J. B., St. Damien de Brandon  
 Denoncourt, W., Grandes Piles  
 Dent, Peter, St. Sixte  
 Dery, Joseph, Mistassini  
 Desaulniers, A. L., Yamachiche  
 Desbiens, François, St. Epiphane, Temiscouata  
 Deschambault, R., St. Jerome  
 Desjardin, Francis, Ste. Beatrix  
 Desmarais, S., St. Bonaventure d'Upton  
 Desmarais, X., Farrellton  
 Desmarais & Messier, Richmond  
 Desrochers, J. B., St. Flavien  
 Dion & Paradis, St. Roch de l'Achigan  
 Dionne, Ant., St. Mathieu  
 Disraeli Box Co., Disraeli  
 Doyon, Jos., Rang St. Louis, St. Frélicie  
 Drouin, Jules, St. Jérôme  
 Drouin, Philias, Ste. Agathe  
 Dube, D. N., Amqui  
 Dubois, A., St. Paul de Chester  
 Dubois, E., St. Jovite  
 Dubois, L. Adelard, Hebertville, Lac St. Jean  
 Duboyce, R. P., West Bolton  
 Dubreuil, Alph., St. Placide  
 Dubuc & Plante, Val des Bois  
 Ducharme, J. N., & Sons, Ltd., St. Eleuthère  
 (Kamouraska Co.)  
 Duffy, E. J., & Son, Gould  
 Duquay, David, Grand Pabos  
 Dumais, Henri, Lac Bouchette  
 Dumontier & Lajoie, St. Justin

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QUEBEC—Con.

Dunn, Thom., St. Etienne de Beauharnois  
 Duplessis, Eug., St. Janvier  
 Duplin & Frères, Duplin  
 Dupont & Dupont, Ste. Flore  
 Dupré, Calixte, St. Pacôme  
 Dupuis, Cleo., St. Victor Station  
 Duquet, Chas., St. Nicholas  
 Duquette, Alex., Minerve  
 Duquette, Euclide, & Frère, St. Eustache  
 Duquette, O., St. Augustin, Two Mountains  
 Durault, Alcide, St. Camille  
 Dussault, Mls. Alfred, Victoriaville  
 Earle Bros., Lachute  
 Eastern Townships Box Co., Disraeli  
 Eddy, E. B., Co., Hull  
 Elliott, Walter E., Shawville  
 Elliott, H. S., Shawville  
 Ennis, Nap. J., Ste. Hélène de Kamouraska  
 Erickson, E. J., North Wakefield  
 Etienne & Brouillet, L'Indeville  
 Farrell, Frank, Wolfe Lake  
 Fassett Lumber Co., Ltd., L'Assise  
 Fautoux, J. A., Perkins Mills  
 Favier, E., Namur  
 Feeteau, Jos., St. Georges Est  
 Fenderson, Jno., & Co., Shawville  
 Fenderson, Jno., & Co., St. Moise  
 Findley, Jas. N., Radford  
 Fiske, Edward, Joliette  
 Flamond, H. A. E., Frère & Cie., St. Patrice  
 Fletcher Pulp & Lumber Co., Ltd., Sherbrooke  
 Fleurant, J. B., Nominigau  
 Foisy, Elie, St. Sauveur des Montagnes  
 Forest, Louis, St. Wendel  
 Forest Reserve Pulp & Paper Co., Ltd., Montreal  
 Fortier, Adolphe, St. Prosper, Dorchester  
 Fortier, Jos., St. Zacharie  
 Fortin, A. J., St. Henri  
 Francoeur, Jos., St. Aubert  
 Fraser & Co., Deschênes (Hd. Office, Ottawa)  
 Fréchette, Elias, St. Cyrille de Wendover  
 Fréchette, L. L., St. Ferdinand de Halifax  
 Frigon & Desrosiers, St. Moise (Co. Matane)  
 Gadoury, Narcisse, St. Jean Matha  
 Gagné, Jos., St. Bruno, Kamouraska  
 Gagné, Pierre, (See St. François Lumber Co.)  
 Gagné, Simcon, Ste. Anne de la Pocatière  
 Gagné, Zacharie, Maria  
 Gagnon, Cléophas, Ste. Cecile, Lac Mégantic  
 Gagnon, Hilaire, St. Jean de Dieu  
 Gagnon, H. Louis, Lambton  
 Gagnon, Jean & Jos., Chambord  
 Gagnon, L. A., Amqui  
 Gagnon & Frères, St. Marcel (L'Islet Co.)  
 Gale, Geo., & Sons, Waterville  
 Gallant, Philibert, St. François d'Assise  
 Gallibois & Boulanger, St. Pierre  
 Garant, Andrew, Caplin River  
 Garant, Jos., Caplin River  
 Garvin, Jas., Bourg Louis  
 Gauthier & Frère, Montclair  
 Gauthier, Dorilas, Bon Desir  
 Gauthier, F. X., Beaulieu  
 Gebbie, Thom., & Son, Howick  
 Gélinas, Josephat, St. Boniface  
 Genereux, Noe, St. Jean de Matha  
 Germain & Frère, St. Félien  
 Gibson, Wm., (Rockburn Mills), Rockburn  
 Giddings, Forest, Knowlton  
 Giguère, Art., & Frères, St. Sabine de Bellechasse  
 Giguère, Elie, St. Zacharie  
 Gilbert, Aime, St. Bruno  
 Gilbert, Jos., St. Elzéar de Beauce  
 Gilbert, J. O., & Co., East Dudswell  
 Gilbert, Theo., St. Joseph, Beauce

## QUÉBEC—Cont.

Gillies Bros., Buckingham  
 Gilmour, Mde. A., Contrecoq  
 \*Gilmour & Hughson, Ltd., Hull  
 Gingras, André, Warwick  
 Gingras, Nap., Rivière Noire  
 Gingras, Mrs. Pierre, Neuville  
 Girard & Lupien, Ste. Brigitte des Saults  
 Gosselin, Jos., St. Etienne de Lauson  
 Goupil, Ferdinand, Ste. Germaine du Lac Etche-

man

Goupil, Phil., St. Rémi de Tingwick  
 Grandbois, M. A., St. Casimir  
 Grégoire, I. R., L'Epiphanie  
 Grégoire, Jos., Chantelle  
 Grégoire & Moileur, Minerve  
 Grenier, Jules, St. Théodore  
 Grenon, Dufour & Frères, La Descente des Fem-  
 mes, Chicoutimi  
 Gros Falls Lumber Co., Gros Falls  
 Grier, B., Montreal  
 Griffin, G. A., Boynton  
 Griggs, W. A., Granby  
 Guelph Patent Cask Co., Ltd., Scotstown  
 Guthrie, Frank C., Guthrie  
 Guy, Stanislas, Tessierville

Hall, Louis E., Bécancourt  
 Hamel & Allard, Ancienne Lorette  
 Hamel, Côme & Frère, St. Ephrem de Tring  
 Hamilton, D. A., Fitch Bay  
 Hamilton, Wm., A., New Glasgow  
 Hammond, L. W., Hill Head  
 Hansen, A. K., & Co., Quebec, (82 St. Peter St.)  
 Hardy, Eugène, & Frères, St. Casimir  
 Harrison & Co., Petite Matane  
 Haveron, D., Venosta  
 Hebert, Louis, Stratford Centre  
 Heman, Jos., St. Methode d'Adstock  
 Héneault, Rémi, St. Norbert  
 Heon Philippe, St. Louis de Blandford  
 Highland Sawmill Co., Stanstead  
 Hodgins, Robt. G., Shawville  
 Hodgins Bros., North Clarendon  
 Houldsworth, G. H., South Bolton  
 Howard, B. C., & Co., Sherbrooke  
 Hughes, Peter, Ripon  
 Hunting, W. H., Huntingville  
 Hupe, Pierre, Hull  
 Hyatt, A. S., Moe's River

Iberville Lumber Co., Sault au Mouton  
 International Lumber Co., St. Sabine

Jalbert, J. B., Fox River  
 Jean, Michel, Mt. Carmel, Kamouraska  
 Jean, Pierre, St. Aubert  
 John, Jos., Lac Etchemin  
 Joly de Lotbinière, A., Leclercville  
 Joubert, Alphonse, St. Gabriel de Rimouski  
 Jourdain, Françoise, Wotton

Karr, S., Brookdale  
 Kealy, Jno., Venosta  
 Kelly, Matthew, & Sons, Vinton  
 Kelly, P., & Co., Kelly's Mills  
 Kinnear Bros., Reedsdale  
 Kirkby, Isaac, Birshton

Laberge, Naa., Péribonka  
 Labrie, Nap., St. Charles, Bellechasse  
 Labrie & Frère, St. Charles  
 Lacaille, Sam., Nominique  
 Lacasse, Théo., Ste. Claire  
 Lacasse, Wilfred, Hemmingford  
 Lachance & Fils, Rivière du Loup  
 Lachapelle, Jos., St. Esprit  
 La Cie de Meubles, Jonquières  
 Lacroix, Jos., St. Calixte de Kilkenny

## QUÉBEC—Cont.

Lacroix, J. R., St. Philomène de Forterville  
 Laflamme, A., St. Benoit  
 Laflamme, Auguste, Arthurville  
 Laflamme, B., St. Benoit Labre  
 Lafleur, O. B., & Fils, Ltd., Lachute  
 Laforte, J. L., Camapual  
 Lagueux, Alexis, Ste. Frédéric Beauce  
 Lahue & Rousseau, St. Zépherin  
 Lainease, Albert, Lemieux  
 Lagueux & Frère, St. Théodore de Chertsey  
 Lake Megantic Pulp Co., Lake Megantic  
 Laliberté, Alfred, Lac aux Sables  
 Laliberté, Gédéon, St. Agapitville  
 Laliberté, J. E., Lourdes  
 Laliberté, Jos., & Son, Ste. Cécile Station  
 Lalonde, Damien, Montreal  
 Lalonde, Wm., St. Clot  
 Lamarche, Jos., Lachute  
 Lamontagne, Arthur, St. Nérée  
 Lamontagne, Jules, St. Zacharie  
 Lamy, Onésime, St. Stanislas de Champlain  
 Lamy, Ovide & Thomas, St. Paulin  
 Landry, D. O., St. Sylvester East  
 Landry, E., Kingsy Falls  
 Landry, Jno., Gascons  
 Landry, Jos., Gould  
 Langevin, A. H., Lac Labelle  
 Langevin, Chas., North Timiskaming  
 Langevin, Jerome & Jos., Val des Bois  
 Langlois, Albert, Armagh  
 Lapointe, Chas., Grandes Bergeronnes  
 Lapointe, Edmond, Ruissseau des Olives  
 Lapointe, Isidore, St. Camille  
 Lapointe & Nolet, Buckland  
 Laprè, Jos., Racine  
 La Rivière, René, St. Ours  
 La Rue, G. Ant., Neuville  
 Latourrelle, Chas., Gracefield  
 Laurendeau, Gatten, St. Cyrille de l'Islet  
 Laurendeau, Narcisse, Normandin  
 Lausier, A., Cedar Hall  
 Lauson, Louis, Ste. Anne des Plaines  
 Lebel, Aug., Garneau  
 Lebel, Jos., St. Perpetue  
 Lebel, Nanaire, Hocquart  
 Leblanc, Adolphe, Ferme Neuve  
 Leblanc, Chas., Nouvelle  
 Leclerc, Achille, Rivière Noire  
 Leclerc, G., Rivière à la Martre  
 Leclerc, Jos., St. Adalbert  
 Leclerc & Frère, St. Rosaire  
 Lefebvre, R., St. Stanislas de Champlain  
 Lemay Bros., St. Camille  
 Lemay, J. Alphonse, Portneuf  
 Lemay, Jos., St. Croix  
 Lemieux, Jos., Mistassini  
 Lemye, Amable, Yamachiche  
 Leonard & Frères, Notre Dame de l'Esperance  
 Lepage, Jos., Ste. Anne des Monts  
 Lépicier, E., St. Emélie de L'Energie  
 Leprie, Alf., Valcartier  
 Letourneau, Didace, St. Magloire  
 Leveille, Alcide, Rivière à Pierre  
 Levesque, Louis, St. Blandine  
 Levesque, Philias, St. Honoré  
 Ling, Jno., & Sons, Ste. Elizabeth de Warwick  
 Little, Jas., Escuminac  
 Lizotte, J. B., St. Herménégilde  
 Lotbinière Lumber Co., Lyster Station  
 Lupien, E., Wickham  
 Lussier, H., St. Angèle de Monnoir  
 Lynch, Wm., L'Epiphanie  
 Lyon, E. N., Stornaway

Mac Lumber Co., Bury  
 McArthur, Peter, & Son, Dewittville  
 McCall, H., Gaspe Bay South  
 McCluskey, M., Laurel

Quebec—Cont.

McCauley & Moffatt, Fort William  
McCrack, Michael, Venosta  
McCrack, Neil M., Venosta  
McFadden, J. J., & Co., East Templeton  
McFaul, A., & Bros., Lachute  
McGibson, P. & A., Lachute Mills  
McKee, A. H. Denj., Stoneham  
McLaren, Jas., Co., Ltd., Buckingham  
McLaughlin & Talbot, Warden  
McLeod Bros., Milan  
McNeil, D., Avoca  
McPherson, C. A. R., Magog  
McRae, Ed. R., Lower Ireland  
Magnan, Simon, Newville  
Magnan, Theophile, St. Thècle  
Malson, L., St. Raymond  
Marchand, Geo., St. Thècle  
Marcotte, Alfred A., South Roston  
Marcotte, A. & R., St. Gilbert  
Marcotte, F., Shefford Vale  
Marcoix, Magloire, St. Eugène de Grantham  
Marier, Emile, St. Cyrille de L'Islet  
Marois, R., Blue Sea Lake  
Marquis, Alex., St. Isidore de Gaspé  
Marshall, M. L., Harrington East  
Marsouins Lumber Co., Marsouins  
Martel, Jos., & Frère, Belmira  
Martin, J. & Co., St. David de Yamaska  
Massé, F. X., Ste. Agathe Lotbinière  
Matapedia Lumber Co., Milniket  
Matte, H., Lac des Ecorces  
Matte, Louis, Pont Rouge  
Maurin, Désiré, St. Damien  
Meilleur, F., Brébeuf  
Ménard, Alex., St. Michel des Saints  
Ménard, Nap., La Présentation  
Mercier, Jos., St. Odilon de Cranbourne  
Mercure, A., Drummondville  
Mesaier, Jos., St. Louis de Bonsecours  
Methot, Arthur, St. Antoine de Tilly  
Metis Lumber Co., Ltd., Price's Village  
Michaud, A., St. Fabien  
Michaud, Jos., St. Moïse Stn. (Co. Rimouski)  
Mignault & Cie., Moulin Mignault  
Millen, Wm., & Frère, Ahuntsic  
Miller, A. & M., Haldimand  
Miller Lumber Co., The, Wulham Station  
Millet & Frère, Lawrenceville  
Mireault, Ernest, St. Côme  
Missionnaires du St. Esprit, Ironside  
Mitson, A. C., Magog  
Molloy, Felix, Grand Pabos  
Mongeon, Felix, Verchères  
Mont Laurier Sawmill, Mont Laurier  
Montgomery & Sons Co., New Richmond  
Montpetit, G., Coteau Station  
Monty, Adelard, Roxton Pond  
Moore, Richard, Wright  
Morency, Norbert, St. Tite des Caps  
Morien, Wilfred, St. Roch L'Achigan  
Morin, Arthur, St. Elzear  
Morin, A., & Frère, St. George de Windsor  
Morin, Edouard, Ste. Claire  
Morin, Emile, St. Eloutherie  
Morin, Geo., Lac Weedon  
Morin, Jos., St. Cyprien  
Morin, L. P., & Fils, St. Hyacinthe  
Morin, P. Emile, South Stukely  
Morin, Theophile, Vallier Station  
Morneau, Chas., St. Donat  
Morneau, François, Ste. Perpétue de L'Islet  
Morneau, Jos., Lac Beauport  
Morrison, Ste. Fortunat, Roberval Ouest  
Mull, Jno., Beech Grove  
Murphy, P. T., Mayo

Nadeau, Honore, St. Séverin de Beauvillage  
Nadeau, Jos., St. Séverin de Beauvillage

Quebec—Cont.

Nadeau, P., & Sons, Grand Cassepe Inn  
National Lumber Co., Ltd., Papineauville  
Naud, Albert, St. Alban  
Nault, Lausophe, Daveluyville  
Nelson, Thos., Wakefield  
Nichol, Victor, Martinville  
Nicolet Falls Pulp & Lumber Co., The, Nicolet Falls  
Noël, L. O., St. Ferdinand  
Normand & Frères, St. Norbert d'Arthuroaska

Ouellet, Jos., & Cie, Trois Pistoles  
Ouellet, Thos., Ste. Hélène de Kamouraska

Papillon, J. E., Portneuf Station  
Pacquin, Jos. Emile, Deschambault  
Paradis, G. J., Lac au Saumon  
Paradis, J. Hubert, St. Narcisse  
Parent, Damase, St. Isidore  
Parent, Jos., Rivière McKirak  
Parent, J. H., & Frère, Disraeli  
Parker, J. B., Dixville  
Payner, Alphonse, Leeds Village  
Penson, P. Jos., Sweetburg  
Penson, Wm. A., Lacolle  
Pet, Geo., Lakesfield  
Pejapscot Paper Co., Cookshire  
Pelland & Frères, Ste. Elizabeth  
Pelletier, Jos., St. Eugène  
Pelletier, Louis, St. Donat  
Pelosquin, Achille, Ste. Rose de Watford  
Pepin, L., & Co., Ste. Marguerite Terrebonne  
Pepin, Napoleon, Verdun, Montréal, (Mill. — Ours)  
Pepin, Pierre, Minervy  
Perron, Alfred, St. Séverin de Beauvillage  
Perry, Jno., Stanbridge East  
Perit, H. H., Chicoutimi  
Phaneuf, A., St. Denis, River Richelieu  
Phelan, P. A., St. Columbin  
Phoenix & Berger, St. Ephrem d'Upton  
Picard, Alfred, St. Roch des Aulnaies  
Picard, Edmond, Ste. Louise  
Piché, Xavier, St. Basile de Portneuf  
Piet, Edouard, Stoke Centre  
Pineau, Alphonse, St. Anaclet  
Pineau, Jos., St. Anaclet  
Plamondon, Samuel, Stoneham  
Plante, Alexis, St. Alexis des Monts  
Plante, Jos., St. Malachie  
Plante, L., St. Gabriel de Rimouski  
Plante, Norbert, St. Frédéric, Beauce  
Plouffe, Jos. A., Lac des Ecorces  
Plourde, Aug., Notre Dame du Lac  
Poirier, Azarde, St. Célestin  
Poirier Frères & Bellerose, St. Felix de Valois  
Poirier, Pantaléon, St. Celestin  
Poisson, J. B., Gentilly  
Poitras, J. N., St. Eugène  
Poitras, Jos., & Frère, St. Marcel  
Pomerleau, Chas., Ste. Marguerite de Dorchester  
Pope, F. M., & Son, Bury  
Potvin, Ovil, St. Cyrac  
Pouchin, Eugene, St. Martin, Beauce  
Poulin, Johnny, St. Ephrem de Tring  
Poulin, O., St. Michel de Bellechasse  
Price Bros. & Co., Quebec  
Provost, Chas., St. Ephrem de Tring  
Provost, F., Ste. Rose de Watford

Quebec & St. Maurice Industrial Co., Lyster Stn.  
Quinn, B., & Co., Windsor Mills

Rhault, Israel, Rivière Noire  
Rheault, Adolphe, St. Moïse (Co. Matane)  
Rheault, O., St. Valère de Bulstrode  
Richard, Thomas, Bouchette  
Richard & Co., Château Richer

## QUEBEC—Con.

Richardson, J., Co., Ltd., Matane  
 Riendeau, Alex., Stanbridge East  
 Rimouski, La Cie Industrielle de, Rimouski  
 Riopel, Jos., jr., St. Emile de Montcalm  
 Rioux, Cleophas, St. Eloi  
 Rioux, Jos., Ruiseau Arbour  
 Ritchie, David, St. Chrysostôme  
 Rivard, Ludger, Matane  
 Rivard, Ths., St. Didace  
 River Ouelle Pulp & Lumber Co., St. Pacôme  
 Rivest, Nap., Ste. Julienne  
 Roberge, Elzear, Scotstown  
 Robert, Louis, jr., Warden  
 Robidoux, Alfred, L'Annonciation  
 Rodrigue, Jno., St. Ephrem de Tring  
 Rondeau, Adélard, St. Zenon  
 Rossignol, Albert, Notre Dame de la Paix  
 Rouillard, Napoléon, St. Leon de Standon  
 Rousseau, Emile, Latrierville  
 Rousseau, François, L'Assisville  
 Rousseau, Geo., Robertonville  
 Rousseau, J. A., Ste. Anne de la Perade  
 Roy, Arthur, St. Philémon  
 Roy, Gédéon, La Durantaye  
 Roy, Jos., Rivière Blanche  
 Roy, Léon, St. Samuel de Gayhurst  
 Roy, Victor, St. Jude  
 Ruel, Edouard, St. Romain  
 Saguenay Lumber Co., Les Escoumains  
 St. Amand, L., St. Moïse  
 St. Amant, A., St. Thérèse  
 St. Côme, Compagnie Industrielle, St. Côme  
 St. Didace, Compagnie Industrielle, St. Didace  
 St. François Lumber Co., Petit Saguenay  
 St. François Régis, Les Frères de, Peribonka  
 St. Gabriel Lumber Co., St. Gabriel de Brandon  
 St. Gelais, François, Grosses Roches  
 St. Lawrence Pulp & Lumber Corp., Ltd., Chandler  
 St. Onge, Jos., Ste. Ursule  
 St. Pierre, Fortunat, La Martine  
 St. Pierre, Jos., St. Aubert L'Islet  
 St. Pierre, Jos., St. Pierre Baptiste  
 St. Pierre, La Cie de Laiterie, St. Pierre, Montmagny  
 St. Raymond Lumber & Pulpwood Co., St. Raymond  
 St. Simeon Lumber Co., The, Doreil  
 Sanitary Plumbing Mfg. Co., Grassy  
 Sauvageau, O., Grondines  
 Savoie & Cie, Manseau  
 Schoen, F. C., Ladysmith  
 Scierie Ste. Agathe des Monts, Ltd., Ste. Agathe des Monts  
 Scotstown Sawmill Co., Scotstown  
 Seale, J. A., Johnville  
 Senecal & Quidos, Ste. Thérèse de Blainville  
 Sheppard, Jas., & Son, Sorel  
 Sherbrooke Lumber Co., Barachois de Malbaie  
 Silver Lake Lumber Co., Eastman  
 Simard, F., St. Féréal  
 Sirois, Jos., St. Alexandre  
 Smith, Marvin, & Co., Upper Bedford  
 Smith Bros., Campbell's Bay  
 Stag Creek Lumber Co., Low  
 Standard Box Co., Lennoxville  
 Starrak, J. A., New Richmond  
 Strong, G. M., Val Barrette  
 Strong, M. J., Cambria  
 Sully, R. N., & Son, Venosta  
 Sylvestre, Amédée & Geo., St. Charles de Mandeville  
 Sylvestre, J. C., Panet  
 Talbot, D., Wolfstown  
 Tanguay, A., Weedon Stn.  
 Tanguay, P., Langevin  
 Tanguay, Philéas, St. Justine

## QUEBEC—Con.

Tardif, Louis, St. Victor Stn.  
 Taylor, Thos. J., Cumberland Mills  
 Têtu, Thos., Moulin Têtu  
 Theriault & Frères, St. Alphonse  
 Theriault, Jos., St. Pacôme  
 Thibault, A., & Fils, Walker's Cutting  
 Thibault, Desire, & Son, East Hereford  
 Thibault, Jos., Montmagny  
 Thomas, Eustache, St. Rémi d'Amherst  
 Thompson, G. N., Sutton  
 Thomson, W., & Sons, Thurso  
 Titus, Herman I., Dunkin  
 Tobin Mfg. Co., Ltd., Bromptonville  
 Tourville Lumber Mills Co., Montréal  
 Towne Bros., Sydenham Place  
 Tozer, Jared, & Bros., Bonaventure River  
 Trappist Fathers, The, La Trappe  
 Travers, R. P., St. Godfrey  
 Tremblay, Alex., & Son, Duhamel  
 Tremblay, Jos., Ste. Anne Chicoutimi  
 Tremblay, Jos., Ste. Félicité  
 Tremblay, Meron, Petit Saguenay  
 Tremblay, Paschal & Edmond, Les Eboulements  
 Tremblay, Thos., Ste. Marie de Charlebois  
 Tremblay, Wm., Peribonka  
 Trois Pistoles Pulp & Lumber Co., Ltd., Rivière Trois Pistoles  
 Trottier, Alfred, Rivière Bois Clair  
 Trudel, Jno., Bulstrode  
 Tulley, J. R., Anderson's Corner  
 Turcotte, E. A., Val Racine  
 Turcotte, Endore, West Broughton  
 Turcotte, Ferdinand, Panet  
 Turgeon, N. T., Beauceville  
 Turgeon, N. T., & Cie, Bic (Rimouski Co.)  
 Turner Lumber & Pulpwood Co., Lake Edward  
 Vachon, J. Linière, St. Joseph de Beauce  
 Valiquette, J., Nominique  
 Vallée, Arthur, St. Ludger, Lac Mégantic  
 Vallée, Évangéliste, St. Benoît Labre  
 Vallée, Olivier, Lorrainville  
 Valois, Jos., Causapscal  
 Vachet, A., Fabre  
 Verreault, Eustache, Petits Mechins  
 Villemaire, J., Mont Laurier  
 Vincent, J. A., Actonville  
 Vivin, Mrs. Richard, St. Odilon de Cranbourne  
 Warcup, J. J., Les Frères  
 Way, F. W., Rawdon  
 Wayagamack Pulp & Paper Co., Three Rivers  
 Wilson, W. A., Danford Lake  
 Wyatt, N. J., Farnam's Corner

## NEW BRUNSWICK.

Albert Lumber Co., Ltd., The, Albert  
 Anderson, Jas. W. & J., Burnt Church  
 Anderson, Jas., & Sons, Upper Dorchester  
 Babbitt, T. D., Lumber Co., St. Mary's Ferry  
 Bartlett, Ed. N., Bartlett Mills  
 Bartlett, Jesse, Bartlett Mills  
 Baizeman, Arthur, Shediac Cape  
 Bell, E. W., Stickney  
 Bentley, A. F., & Son, Ltd., St. Martin's  
 Billings & Fleming, Elmwood (Carleton Co.)  
 Black, J. L., & Sons, Sackville  
 Briggs, C. F., Oakville  
 Brown, C. A., Salisbury  
 Burchill, Geo., & Sons, South Nelson  
 Burpee, G. F., Avondale  
 Burt, Elwood, Burt's Corner (Mill at Keswick Stream)  
 Cail, T. W., & Sons, Smith's Corner  
 Cameron, Fred., Fawcett Hill (West. Co.)

NEW BRUNSWICK—Con.

Campbell, Burton S., Flume Ridge  
 Carnworth, W. J., Riverside  
 Carvell Bros., Lakeville  
 Chapman, A. E., Janeville  
 Clark & Craig, Hartland  
 Clarke, Byron T., Hibernia (Queen's Co.)  
 Continental Lumber Co., The, River Charles  
 Cormier, Wilfred, East Rogerville  
 Corriveau, Geo., Caron Brook  
 Couturier, Didier, St. Jacques  
 Crandall, A. E., Nerepis  
 Crandall, Harrison & Co., Newcastle  
 Cronkhite, Henry A., Lower Southampton  
 Culligan, J. A., Culligan  
 \*Dalhousie Lumber Co., Dalhousie  
 DesBrisay, Sydney, Petit Rocher  
 Doten, O. B., Oak Bay and Moore's Mills  
 Douglas, Stanley, Stanley, also Cross Creek  
 Duffy, Jas., North Renous  
 Dumas, J. W., Grande-Anse  
 Dunham Bros., Campbell Settlement  
 Edgar, C. C., Three Brooks  
 Eureka Lumber Co., Burnsville  
 Fenderson, Jno., & Co., Head Office at  
 Sayabec, Que.  
 Fleming & Gibson, Ltd., Woodstock  
 Flewelling, G. & G. Co., Ltd., Hampton  
 Fowler & Fownes, Sussex, also Glen Titus  
 Fowlie, George, Little Branch  
 Fraser Lumber Co., Ltd., Plaster Rock  
 Gaudet, S. R., Memramcook West  
 Gilman Bros. & Borden, Pokiok  
 Gilmore, G. W., Glasville  
 Gloucester Lumber & Trading Co., Bathurst  
 Graham, Ernest, Moore's Mills  
 Grant, J. F., Grandview  
 Green, J. B., Tabuenticac  
 Haché, David, St. Isidore  
 Hachey, P. P., Upper Carquet  
 Haley & Son, St. Stephen  
 Hanscom, Douglas A., Tilley  
 Hayden, J. A., Woodstock  
 Hayes, I. C., Beechwood  
 Hickman, C. S., Harcourt, also Dorchester  
 Hilyard Bros., St. John  
 Holmes, Jas. H., Doaktown  
 Humphreys, J. E., Petitcodiac  
 Irving, J. D., Buetouche  
 Jagoe, Ellis, Clifton  
 Jeffrey, N., Sussex Corner  
 Jones Bros., Apohaqui  
 Jones, Trueman, River Glade  
 Jordan, Jno. T., Lower Queensbury  
 Kaye, W. W., Sackville  
 Keenan, Jno., Salisbury  
 Killam, I. N., Killam's Mills  
 Langis, T., St. Anthony  
 Leu, Paul, Co., Ltd., Moncton  
 LeBlanc, Desithe, St. Louis  
 Leger, L. M., St. Anthony  
 Little, Delbert, York Mills  
 Lockhart, C. E. & Co., Notre Dame  
 Lockhart, C. R., Bristol  
 Lockhart, L. D., Moncton  
 Loggie, A. & R., Chatham  
 Louison Lumber Co., Ltd., The, Jacquet River  
 (Hd. Office, Springfield, Mass.)  
 Lynch, T., & Co., Ltd., Nelson Reserve

NEW BRUNSWICK—Con.

McAuley, Jno. E., Lower Millstream, (also Belle  
 Isle)  
 Mc'ann Bros., Rollingdam  
 Mc'urdie, Albert, Belledune  
 McElroy & Murchie, Grafton  
 McFarlane, Chipman, Catamount  
 McKnight, R. T., Martrtown  
 McMillan, Charles, Stanley, also Ryan Brook  
 McMillan, Co., Ltd., Dereham Centre, also Jac-  
 quet River  
 McMillan, Jas., Bocahee  
 McNair Lumber Co., Wapske, (Mill at Leeford)  
 McNutt, Samuel T., Tay Settlement  
 McWilliams, Thos., Ford's Mills  
 Mahoney, P. G., Melrose  
 Martin & Violette, St. Leonard's  
 Mayes, Arthur L., Queenstown  
 Michaud, J. E., Anderson Siding  
 Michaud, T., St. Leonard Station  
 Miller Bros., Tracey's Mills  
 Miller, Charles, St. John, Pokiok  
 Miller, R. J., Black Land  
 Miller, W. P., Newcastle Bridge  
 Moore, B. L., Moore's Mills  
 Moore, Robert L., Mechanics' Settlement  
 Morrison, Jno. A., Fredericton  
 Mosher, J. P., Chance Harbour  
 Mowat, B. A., Campbellton  
 Murchie's, Jas., Sons Co., Benton  
 Murphy, M. E., Sorrel Ridge  
 Murray & Gregory, Ltd., St. John  
 Nadeau, Ernest, St. Leonard  
 O'Regan, Jno., Burnt Land Brook  
 Parker, Jno., Hillsborough  
 Peck & Smith, Hillsborough  
 Pelletier, Nelson, Parents  
 Peters, Fred. S., Peter's Mills  
 Pinder, Jas. K., Pinder  
 Pinet, Wm. A., Burnsville  
 Prescott, Joshua, & Sons, Goose Creek  
 Price, Hanford, Havelock  
 Price & Steves, Hartland  
 Randolph & Baker, Ltd., Randolph  
 Rayworth Bros., Upper Cape  
 Richard, Pierre L., St. Charles  
 \*Richards Mfg. Co., Ltd., Campbellton  
 River Valley Lumber Co., Oromocto  
 Robinson, J. S., Cambridge  
 Runabout Lumber Co., Ltd., Argyle  
 Roy, N. H., (Estate of), Elm Tree  
 Russell, Jas., Lower Newcastle  
 Sadler, F. D., Rowena  
 Sanson, Edwin, Cross Creek  
 Sayre & Holly Lumber Co., Ltd., Briggs Corners,  
 (also Chipman)  
 Seely, G. T., & Son, Round Hill  
 Sherwood, E. G., Pennfield Ridge  
 \*Shives Lumber Co., Ltd., Campbellton, (also  
 Athol)  
 Smith, B. F., Florenceville East  
 Smith, L. B., Central Blissville  
 Smith, Maynard, Tete & Gauche  
 Smith Bros., Millstream  
 Smith Lumber Co., Woodstock  
 Smith, Perley & Co., Woodstock  
 Smith, Estate of E. J., Shediac  
 \*Snowball, J. B., & Co., Ltd., Chatham  
 Soper, Geo. W., & Sons, Head of Millstream  
 Steeves, J. W., Hillsborough  
 Stetson, Cutler & Co., St. John  
 Sullivan, D., & Sons, Red Bank  
 Swan, H. T., Tweedsido

NEW BRUNSWICK—*Cont.*

Swedish Canadian Lumber Co., The, Richibucto

Tait, R. C., Shediac  
Thériault, G. J., Iroquois  
Thompson, Arthur W., Upper Sackville  
Turner, Walter, Port Elgin  
Turner Bros., Hillsborough

Upham Lumber Co., Woodstock (Mill at Odell River)

Verret, Jos., Green River Stn. (also Verret)

Wanamaker Bros., Nauwigewauk  
Wapskehegan Lumber Co., Ltd., Wapske, Victoria Co.

Warner, J. R., & Co., St. John  
Warren, J. L., South Branch St. Nicholas River  
Watson, Alex., St. John (also Belleisle)  
Welch, M. (Estate of), Foreston  
West, Alfred, Cole's Island  
Weston, R. H., & Co., Gagetown  
White, Chas. T., & Son, Ltd., St. John  
White, S. H., Co., Ltd., Sussex  
White & Patterson, St. Martin's (also S. George)  
Wiggins, Ed., Wiggins' Mills  
Wilson, W. F., Hillsborough  
Wilson Box Co., Ltd., St. John  
Winton, John, Archibald Settlement  
Wood, Albert, Coverdale  
Wood, E. E., Baie Verte  
Woods, Wm. F., Armstrong Corner  
Woodman, A. E., Rossville  
Woods, H. W., Welsford  
Wright, Morrison, Stony Creek

York & Sunbury Mfg. Co., Ltd., Gibson

## NOVA SCOTIA

Adamson, Frank, Sundridge  
Allen, A. W., & Son, Middleton  
Allen, G. F., & Co., Brazil Lake  
Anderson, Barnaby, Dalhousie Lake  
Anderson, George, & Son, Toney Mills  
Archibald, Sidney, Upper Musquodoboit  
Archibald & Sutherland, Denver  
Archibald Mill Co., The, New Town  
Ashton, Clarence E., Ecum Secum  
Atlantic Lumber Co., Ltd., South Maitland

Bailey, Daniel M., The Falls  
Banks, Edmond H., Torbrook  
Barkhouse, E. D., & Bros., Port Dufferin  
Barnhill, B. B., Two Rivers  
Barrie, D., & Sons, Auld's Cove  
Barry, A. D., Pictou  
Bayer Bros., Meagher's Grant  
Baxter, R. M., Belmont  
Béliveau & Leblanc, Church Point  
Benev, W. Fletcher, Welsford  
Blakie Bros. & Co., Upper Stewiacke  
Bochner Bros., West La Hève  
Bonnet Bros., Trufolgar  
Boutillier, Dauphinee & Co., French Village  
Bower, Andrew, & Sons, Shelburne  
Bower, George, Lower Ohio  
Bower, John L., Jordan Falls  
Bower, Thos. & Fred., Ohio  
Bower, T. H., & Sons, Lower Ohio  
Bower Bros., Shelburne  
Bowles, Henry B., Cambridge Station  
Boylan, Patrick, & Son, New Ross  
Broughton & Rubble, Westchester Station  
Brown, H. W., Brown's Brook  
Brown, J. P., & Son, S. Shore  
Brown, Victor E., East Southampton  
Bruhm Wm., West Northfield

NOVA SCOTIA—*Con.*

Bruhm Bros., New Cornwall  
Bullivant, Jos. N., Windsor  
Burnett, John, Upper Musquodoboit  
Byers, Wm., West New Annan

Calhoun, T. B., Calhoun P.O.  
Cameron, John K., St. Mary's  
Cameron, W. H., Stellarton  
Campbell, Archie, Glenoe  
Campbell, John B., & Son, Clarksville (also Dodridge)

Campbell, R. J., East Bay  
Campbell Bros., Hunter's Mountain  
Campbell Lumber Co., Ltd., Weymouth  
Cann, Samuel N., & Crosby, Asa, South Ohio  
Carey, George W., East Margaretsville  
Carrigan, D., & Son, Donny Brook  
Carter, Rufus, Southampton  
Chaplin, Ernest W., Upper Musquodoboit  
Chapman, Hiram, Joseph & Robert, Chapman Settlement

Chapman, Howard, & Sons, Leicester  
Chapman, J. J., Northport  
Chappell Bros. & Co., Ltd., Sydney  
Christie, J. R., & G. H., River Hebert  
Churchill, F. E., Darling's Lake (Yarmouth Co.)  
Churchill, Walter, Brooklynn

Clarke Bros., Bear River  
Clyde River Pulp & Paper Co., Clyde River  
Comeau, E. M., Meteghan  
Comeau, Moses J., Comeauville  
Comeau, Simeon A., Concession  
Conrod, Peter, Head Chezzetcook  
Cook, Caleb, Pleasant Valley

Cook, G. T., Cook's Brook  
Cook, Hiram, First South  
Corkum, Silas, Windsor Road  
Creelman, J., Little Bass River  
Crocker, J. A., Pleasant Lake  
Crooks, Frita J., Halifax

Crosby, Howard A., Carleton  
Crosby, Judson, Gardner's Mills  
Crouse, George W., Crouse Town  
Crowdis, J. J., North East Margaree  
Crowe, C. E., Lumber Co., Brooklynn  
Crowley Bros., Street's Ridge  
Cummings, John A., Goshen  
Cunningham, Ford & Son, McLellan's Brook

Dakin, F. R., Pugwash  
Dares, George, Rhode's Corner  
\*Davison Lumber Co., Ltd., Bridgewater  
De Long, Elbridge, Kempt  
De Long, Everett, Kempt  
Deveau, Ben. J., Meteghan  
Dickie, Rufus E., Tangier  
Dominion Coal Co., Springhill  
Douglas Lumbering Co., The, Caledonia  
Doyle, Edward, Whiteside  
Doyle, John, Westchester  
Dryden, W. E., East Bay, C.B.  
Dumphy, Wm., Pondville  
Durkee, Norman P., Pleasant Valley Corner

Eastern Lumber Co., Ltd., Halifax  
Eisenhauer, Clifford, Hammond's Plains  
Elderkin, H., & Co., Port Greville  
Elliott Bros., New Ross  
Elmsdale Brick & Tile Co., Ltd., Elmsdale  
Ernest Bros., Preston

Faltenhine & Baker, Chester  
Feener, M. & S., Farmington  
Ferguson, Alexander, Cleveland  
Ferguson, Daniel A., New Boston  
Fisher, Isaac, Fisher's Mill  
Fitzgerald Bros., Dingwall  
Forbes, J. A., Great Village

NOVA SCOTIA—Con.

Fownes, A. W., Mira Gut  
Fownes, Chas. A., River Dennis  
Fox River Lumber Co., Fox River  
Fraser, Jas. A., Guysborough  
Fraser, John J., Whycoomagh  
Freeman, Avery C., South Brookfield  
Freeman, J. Parker, Greenfield  
Freeman Bros., Sable River  
Frerice & Thompson, Upper Nine Mile River  
Fulton, Scott, Beaver Brook

Gibson, Devany & Gibson, Dalhousie West  
Giddens, W. Ward, Londonderry Station  
Graham, J. E., Nine Mile River (Hants Co.)  
Graham & Nicholl, Carleton  
Grand River Pulp & Lumber Co., Halifax  
Grant, Jas., & Sons, Tracadie Road  
Green, John James, Green's Brook  
Grimm, D., First South  
Gunn, A. G., & Son, East River (St. Mary's)

Haley & Crosby, Deerfield  
Hallamore Bros., New Cornwall  
Halliday, Douglas, Westchester Valley  
Hantsport Fruit Basket Co., Hantsport  
Harlow, Hugh, Sable River  
Harlow & Freeman, Sable River  
Harnish, Chas. A., Greywood  
Harnish, H. C., Springfield  
Hart, H. McC., Halifax  
Hart, John, Waterville (Hants Co.)  
Hartlen, C. W., Milton  
Haskins, Ernest M., Milton  
Hattie, W. H., Sunnybrae  
Hattie Bros., Caledonia  
Hayes, Wm., Argyle Head  
Hebb, Arthur, & Sons, Waterville  
Hennigar, Jno. W., Noel  
Hennyberry, Joseph, Chester  
Hicks, J. H., & Sons, Bridgetown  
Higgins, George, South Vale (Stewiacke)  
Higgins, T. H., Maccan  
Hill, Dan., St. Peter's  
Hiltz, D. & E., Forties, New Ross  
Hulbert, J. G., North Lochaber  
Humes, Daniel, St. Patrick's Channel

Intercolonial Coal Mining Co., Westville  
Irving, John J., Lorne (Pictou Co.)

Jeffers Mfg. Co., Ltd., Parrsboro  
Jodrey, John, Shubenacadie (or Lake Egmout)  
Johnston, H. A., West New Annan  
Jones & Whitman, Ltd., Annapolis Royal

Keddy, W., Milton (Queen's Co.)  
Kedy, J. A., Mahone Bay  
Kelly Bros., Head River Hebert  
Kennedy Bros., West Alba  
Kerr, G., Fox River  
Kerr Bros., Millford  
Keyes & Isenor, Elmsdale  
King, George, River Philip  
King, Willard, Oxford  
King Bros., Oxford  
Kirk, D. G., Antigonish Town  
Knowlton, E. W., Cambridge Station

Langille, Henry, & Co., South Ohio  
Lantz, G. W., Tupperville  
Lantz, Isaac F., New Ross  
Lantz, Patton, New Ross  
Leslie Bros., Port Mouton  
Lewis & Starritt, Bass River  
Lloyd, H., & Son, Waterville  
Logan, J. W., Earltown  
Longmire, Bernard, Hillsburn

NOVA SCOTIA—Con.

Lowe, John W., & Son, Ltd., Brooklyn (Queen's Co.)

McArthur, A. R., Victoria  
McClearn Co., Ltd., The, Liverpool  
McDonald, Daniel, North Side Little Narrows  
McDonald, D. B., River Dennis  
McDonald, James D., Margaree  
McDonald, John L., Bay View (Pictou P.O.)  
McDorman, G. H., Debert Station  
McElmon, E. B., Onslow  
McElmon, E. H., Dartmouth  
McElmon Bros., East Leicester  
McGill, Joseph, Shelburne  
McGregor, J. D. & P. A., New Glasgow  
McIntosh, D. A., Blue Mount

McIntyre, P. J., River Dennis  
McIvor & Kelly, River Hebert  
McKay, A., Baddock Bridge  
McKay, Andrew, Lorne (Pictou Co.)  
McKay, D., Whycoomagh  
McKay, Peter, Bay View  
McKay, Robt. A., River John  
McKay, Thos., Earltown  
McKean & Son, Cross Roads  
McKeen, Norman, Aspen  
McKenzie, Alex. K., Port Hood  
McKenzie, Arch., River John  
McKenzie, Colin, Victoria  
McKenzie, Wm., Earltown  
McKiggan, D. J., McNab's Cove  
McLean, Duncan D., Bailey's Brook  
McLennan, A., River Dennis  
McLeod, A. R., L'Ardoise  
McLeod, John D., Loch Lomond  
MacLeod Pulp Co., Ltd., Milton  
McNeil, Arch., Millville  
McNeil Bros., Windsor Forks  
McPherson, C. A., Conn's Mills  
McRae, Roderick, West Bay  
Maritime Lumber Co., Ltd., Halifax  
Marks, Edward A., Ship Harbor  
Marks, John M., Ship Harbor  
Marsh, L., C. Economy  
Marshall, H. H., Digby  
Martin, Lyle & Wm., East Jordan  
Matheson, George J., L'Archeveque  
Matheson, John D., Hopewell (Pictou Co.)  
Mattinson, B. N., Pugwash  
Merry, Simon D., Maitland  
Millard, John, Liverpool  
Miller, Lewis, & Co., Ingram Port  
Miller & McPherson, Waverley or Fall River  
Millet, Henry, Martock  
Milne, H. M., Petpeswick Harbour  
Minard, L. H., Milton  
Minasville Lumber Co., Minasville  
Mitchell, John, River John  
Mitchell, John G., Oyster Ponds  
Mitchell Milling Co., The, Denver  
Moirs, Ltd., Halifax  
Monk, G. L., Ship Harbor  
Morrison, Jas. F., Thorne's Cove  
Morrison, John S., Hansford  
Morrison, Neil, Loch Lomond West  
Morton, Bennett & Joseph, Cherryfield  
Murchy, Lewis, Murchyville  
Murphy, Geo. H., New Salem  
Murphy, Thos., Emerald  
Myers, Peter, & Son, Head of Jeddore

Necum Teuch Lumber Co., Necum Teuch  
Nelson, Albert, Shubenacadie  
Newville Lumber Co., Newville  
Nickerson, David, Brooklyn  
Nicol, Frank G., Clyde River  
Nix, Henry, Collingwood Corner

## NOVA SCOTIA—Con.

North River Lumber Co., Murray  
Nova Scotia Steel & Coal Co., Ltd., Sunnybrae

Palmer, Hanley, Stanley (Hants Co.)  
Parker-Eakins Co., Ltd., Meteghan River  
Patterson, H. B., Pembroke  
Patterson, R. W., & Son, South Alton  
Pereault, Peter, New France  
Pearl Lake Mill Co., Kemptville (Yarmouth Co.)  
Phelan, J. R., Mill Village  
Phinney, W. L., South Farmington  
Pineo, W. W., Waterville  
Porter, D., & Son, Westville  
Porter, John B., Belleville (Yarmouth Co.)  
Prosser, Maurice, Kemptville  
Pugsley, I. L., Portapique (also Five Islands)  
Purdy, J. C., Amherst  
Purdy, Thos. W., Millvale (Also Jackson)  
Pye, W. T., & Co., Ecum Secum Bridge

Refuse, W. H., New Ross  
Ramsay, G. & S., West St. Andrews  
Ramsay, Wm., Dalhousie West  
Ramsay, Jas. W., Perotte  
Ramsay, Jas. W., Wittenburg  
Redden, Chalmers R., Kentville  
Reeves, C. & J., Springdale  
Reid, L. R., Lower Stewiacke  
Reid, Wm., Wallace  
Rhodeniser, T. U., Parkdale  
Rhodes, Curry & Co., Little Forks  
Rice, B. H. A., Bear River  
Ripley Bros., River Philip  
Ritey, Jas. A., Musquodoboit Harbor  
Riversdale Milling Co., Riversdale (Lunenburg Co.)  
Roach, Raymond, Eastern Harbour  
Robichaud, E. J., Meteghan Centre  
Robichaud, Philomen L., Maxwellton  
Robinson, Hedley, Brookfield  
Robinson, Wright & Co., Ltd., Sand River  
Rodgers, C. S., Nictaux Centre  
Rogers Bros., Rose P.O. (Westchester)  
Rood & McGregor, New Glasgow  
Ross Bros., Glencig  
Rowlings, Geo., & Sons, Musquodoboit Harbour  
Rutledge, R., Sheet Harbour

Sabeau, C. F., New Tusket  
Sable Lumber Co., Ltd., Wilkins' Siding  
St. Croix Lumber Co., Ltd., Hartville  
Sanford, Wilson, Billtown  
Scotia Lumber & Shipping Co., Ltd., Sherbrooke  
Scott, Thos., & Sons, Barrington  
Shatford H. & L., Milcove  
Simpson, Barton J., Manchester  
Sitman, Chas., Ship Harbour  
Sissiboo Planing Mill, Weymouth Bridge  
Smith, Alex. J., Grand River (Richmond Co.)  
Smith, Benj. H., Shinimecas Bridge  
Smith, George, Shinimecas Bridge  
Smith, John W., Bridgewater  
Smith, Morley, Fort Lawrence  
Smith, Nathaniel, Harmony  
Soley, R. P., L. Economy  
Specht Bros., Barton  
Spicer, Eurias, Spencer's Island  
Spicer, John N., Spencer's Island  
Springhill Lumber Co., Ltd., Amherst  
Stanford, John, Chester  
Steele & Huntly, Scott's Bay  
Stephen Bros., Windsor Junction  
Stephens, Wm. F., Tenecape  
Stewart, C. P., Little Harbour  
Stewart Bros., Jackson  
Stonehouse, Herbert K., Springhill  
Stonehouse, W. I. & A. C., Collingwood Corner  
Thibyan, T. O., Milton

## NOVA SCOTIA—Con.

Sutherland, Allan A., Riverdale  
Sutherland, Robert, & Son, Clyde River  
Sutherland Bros., Denmark  
Sylvanian Mill, The, Milton

Taylor, Alex., & Sons, Brooklyn  
Taylor, Frank H., Chaswood (Halifax Co.)  
Taylor Bros., Wittenburg  
Telfer Bros. Woodworking Co., Ltd., Bridge-water  
Tompkins, Jas., Emerald  
Tupper, A. C., & Son, Scott's Bay  
Tupper, Elias, Chester Basin or Bridgewater

Veinot, L. R., New Albany  
Veinot, W., New Germany

Wagoner, Geo., & Sons, Danvers (Digby Co.)  
Wagstaff, John H., Round Hill  
Walls, Geo. & R., Allendale (Shelburne Co.)  
Ward, Wm. E., North Alton  
Warne, H. T., Hill Grove  
Webber, Amos, Jeddore  
Webber, Arthur, Jeddore  
Webster, W. H., Mc-Lellan's Mountain  
Weir, John, Pine Tree  
Wener, L., Westville  
Wentzell Milling Co., Wentzell's Lake  
West, George, Morristown  
Whalen, Wellington, Chester Grant  
Williams Bros., Barney River  
Wood, John W., Cold Brook Station  
Woodworth, A., Millford Station  
Woodworth, Bruce E., Berwick

Young, Alex., Millsville

Zwicker, Ed., & Sons, Northfield and Brookfield  
Zwicker, P. B., New Cornwall

## PRINCE EDWARD ISLAND.

Acorn, Seaforth Mack, Pownal  
Affleck, H. S., Bedeque  
Anderson, Murdock G., Newton Cross  
Annandale Lumbering Co., Annandale

Bagnall, J. C. Pope, Hazel Grove

Callaghan, Peter W., Dromore West  
Cannon, Jos., Ellerslie  
Collins, Daniel, Sturgeon Bay  
Craswell, Jno. H., Clyde Station  
Creamer, Bernard, Souris

Dixon Bros., Breadalbane

Hancock, Jno., & Sons, Wood Islands  
Hickox, S., Cornwall

Ives, Chas. W., North Tryon  
Ives, Geo., North Tryon

Johnson, W. E., Elmsdale

Klondyke Lumber Mills, Souris

Leard, Geo. E., & Son, Crapaud  
Leard, Samuel J., Mt. Stewart, R.R. No. 3  
Lewis, Daniel, St. Peter's

McCaull, Anthony A., Ellerslie  
McEwen, W. H., Bristol  
McKinnon, Angus, Coleman  
McLean, Alex. J., Head of Montague Mills  
McMillan, Geo., Alberry Plains  
McNally, Jas., Egmont Bay  
McPherson, A. M., Clarktown

PRINCE EDWARD ISLAND—Con.

McVane, Stanley, Bothwell  
Marchbanks, David, Alma, Lot 3  
Montague Sash & Door Factory, Montague  
Morson, A. S., Upton  
Munn, Geo., Mermaid  
Murphy, Andrew, Kensington, R. R. No. 4

Palmer, Jno. D., (Estate of), Freeland  
Perry, Jos. F., Muddy Creek  
Peters, Bruno, St. Louis  
Poole, C. Herbert, Lower Montague

Rose, S. J., Lakeville  
Ross, Geo. W., Bridgetown

Scott, Jno. F., Clyde River  
Stewart, Everett, Vernon River  
Sutherland, W. G., Montague Bridge

Warren, C. H., & Son, Elliott's Corners  
Warren, Ernest E., North Grove  
Warren, Wellington, Norborough  
Wright, Geo., M., Central Bedeque  
Wright, R. Theo., Campbellton

MANITOBA.

Barker, W., Glenella  
Bengstrom, C. E., Scandinavia  
Burnell, Oscar, Arbakka  
Burrows, T. A., Grandview  
Butson, Wm. F., Birch River

Canadian Bank of Commerce, Mafeking  
Canon Lake Lumber Co., Ltd., Winnipeg (Mill in Ontario)  
Caverly & Sons, Bowsman River  
Cockerill & Son, Merridale

Finger Lumber Co., Ltd., The Pas  
Finnson, S., Vidir  
Forsyth, D., Sandy Lake

Great West Lumber Co., Winnipeg (Mills at Greenbush, Sask.)

Hall, Eric, Scandinavia  
Hammersley Bros., Birnie  
Harlow, J. H., Rossburn  
Hawkins, J. A., Kenville  
Heale Bros., Kreuzburg  
Hemmingston, J., Scandinavia  
Herron, H., Bowsman River

Kenny, Wm. J., Garson  
Kenderman, G., Cromwell  
Kippan, Alex., Elphinstone

Leary, J. G., Leary  
Loewen Bros., Steinbach

McClure, J. H., Kreuzburg  
McGillivray, Jas. G., Norgate  
McKinney, F. V., Turtle Mountain, Boissegain  
McKinnon, Alex., McCreary  
McNab, W. A., Bowsman River  
Maguire, Amos, Duck Mountain  
Mason, Jas., & Sons, Riding Mountain  
Morris, Frank, Gilbert Plains  
Mutenbacher Bros., Mafeking

Northern Construction Co., Ltd., Winnipeg, (Mill at Ft. Frances, Ont.)

Papineau, Jos., & Son, St. George  
Parkerson, W., Birch River  
Paull, Geo., Swan River

MANITOBA—Con.

Peden, Wm., Rossburn  
Pressman, A., Camper

\*Rat Portage Lumber Co., Winnipeg  
Red Deer Lumber Co., Winnipeg (Mills in Saskatchewan)  
Robinson, Wm., Co., Ltd., Selkirk  
Rutley, Jas., Ochre River

Skellan, Wm., Rosewood  
Smith & Acres, Steinbach  
Sonenburg, August, Metrease  
Standard Lumber Co. of Manitoba, Ltd., Winnipegosis

Thomas, Mrs. M. J., Pleasant Home  
Thorvaldson & Sigurdsson, Icelandic River  
Triwoohka, G., Mountain Road

Watson, Jno. J., Danvers  
Williams, W. J. F., Fork River  
Wilson, R. B., Dugald

SASKATCHEWAN.

Albert, J. B., Prince Albert

\*Big River Lumber Co., Big River  
Blackburn, H., Bannock

Given Bros. Lumber Co., Cecil  
Great West Lumber Co., Greenbush (Head Office Winnipeg)

Hendrickson, Lars, (Fort à la Corne) Kinistino

Joyce & McKechnie, Star City

MacDonald, Jack, Canwood  
Madon Bros., St. Walburg  
Meier, Henry, Ravine Bank

Nugent, Andrew, Steep Creek

Otte, Jos., Shellbrook

Pearse & Edworthy, Pusane  
\*Prince Albert Lumber Co., Prince Albert  
Pring, John, Crooked River

\*Red Deer Lumber Co., Burrows (Head Office Winnipeg)  
Ruby Lake Lumber Co., Ruby Lake

Saskatchewan Lumber Co., Ltd., Crooked River  
Saskatoon Lumber Co., Saskatoon  
Shaw, Chas., Pleasant Valley  
Smythe's Lumber Mills, Avebury

Trombley, H., Crystal Springs  
Turnbull & Barnum, Crooked River

ALBERTA.

Athabasca Lumber & Supply Co., Ltd., Athabasca

Bailey Bros., Mountain House  
Beaver Creek Lumber Co., Beaver Mines  
Bibby, Isaac, Pine Creek  
Brightman Bros. & Wilson, Mountain House

Canadian Pacific Railway Co., Dept. of Natural Resources, Calgary  
Carbondale Lumber Co., Coleman  
Card, J. A., & Sons, Leslieville

## ALBERTA—Con.

Clemes, H., & Son, Barrhead  
Cornwall & Gauthier, Athabaska  
Cummings, Geo., Wittenburg

De Mille, Vernon N., Priddis  
Dent, W. J., Thorsby

Eau Claire & Bow River Lumber Co., Ltd., Calgary  
Edmonton Lumber Co., Ltd., Edmonton

Featherstonhaugh & McLellan, Fort Saskatchewan  
Featherston & Mason, Nanton  
Fulgate, Wm., Wellsdale  
Foothills Lumber Co., Claresholm  
Fraser, D. R., & Co., Ltd., Edmonton

Gagnon, Isaac, Athabaska

Hagen, N. T., Sundre

Johannesson, J. T., & Sons, Bergen

Lineham Lumber Co., Ltd., High River

McDougal & Martins, Leslieville  
McInroy, Jas., Innisfail  
McLaren Lumber Co., Blairmore  
McPherson Bros. Lumber Co., Bentley  
Marler, S. A., & Son, Clover Bar

Northwest Lumber Co., Ltd., Mulhurst (Mill at Pigeon Lake)

Pelletier Lumber Co., Coleman  
Pettepher, F. R., Stauffer  
Potter & Boquette, Three Hills

Radway, O. S., Myrtle Creek  
Reed & Son, Rimbey  
Richards Bros. Co., Morley

Scheideman Co., Mewassin  
Smith, A. W., Paddle River  
Stone, A., Stone's Corners  
Strawberry Sawmill Co., Stone's Corners

Valley Lumber Co., Leslieville

Walter, Jno., Limited, Edmonton

Zackowski, Jno., Westlock

## BRITISH COLUMBIA.

Abbotsford Timber & Trading Co., Ltd., Abbotsford  
Abernethy & Loughheed, Port Haney  
\*Adams River Lumber Co., Chase  
Adolph Lumber Co., Baynes Lake  
Alert Bay Sawmill Co., Alert Bay  
Allison, A. P., & Co., Rivers Inlet  
Alberta Lumber Co., Vancouver (Mills at False Creek)  
Angvine Lumber Co., Silverdale  
Arlington Shingle Co., Arlington Stn., Nanoose Bay  
Armour & Homfrey, Lewis Creek  
Bailey, D., & Co., Central Park  
Baker Lumber Co., Ltd., Waldo  
Beaver River Lumber Co., New Westminster (Box 754)  
Bella Coola Lumber Co., (H. O. Hanson), Hagensborg  
Bird, Geo. H., Port Alberni

## BRITISH COLUMBIA—Con.

Bowman, O., Sardis  
Brand, Fred'k, Alberni  
Bridges Lumber Co., Ltd., The Fort Steele  
Britannia Mining & Smelting Co., Ltd., Britannia Beach

\*British Canadian Lumber Corp'n, Port Mellon and Howe Sound

\*British Columbia Mills, Timber & Trading Co., Ltd., Vancouver

British Columbia Canning Co., Rivers Inlet  
British Columbia Mfg. Co., New Westminster

\*Brunette Saw Mill Co., New Westminster  
Buckworth, A. B., Vancouver (Crown Bldg.)

Bulkeley Valley Lumber Co., Telkwa  
Bulman Lumber Co., Ltd., Victoria

Burns Lake Trading & Lumber Co., Hazelton  
Burrard Lumber Co., Ltd., Vancouver

Cameron Lumber Co., Victoria

Campbell River Lumber Co., Hazelmore

Canadian Cedar Lumber Co., Vancouver

Canadian Collieries (Dunsmuir) Ltd., Victoria

\*Canadian Pacific Lumber Co., Ltd., Vancouver

\*Canadian Puget Sound Lumber Co., Victoria

Canadian Southern Lumber Co., Sidney

\*Canadian Western Lumber Co., Ltd., Fraser Mills

Canyon City Lumber Co., Creston

Carter, R., & Son, Vananda

Champion Shingle Co., Eburne

Charteris, W. B., Milnes Landing, Sooke

Chew, Joseph, Lumber & Shingle Mfg. Co., Vancouver  
Columbia Coal & Coke Co., (A. McEvoy, Trustee)

Coalmont

Converse Brown Shingle Co., Sidney

Comox Sawmill Co., The Comox

Collinson Lumber Co., Sardis

Cotton, A., Vancouver

Cottonwood Lumber Co., Deroche

Crawford, Wm., & Son, South Kelowna

\*Crowsnest Pass Lumber Co., Ltd., Wardner, also Galloway

Cummings & Grinton, Larkin

Deep Creek Lumber Co., Soda Creek

Deer Lake Lumber Co., Burnaby Lake, also Vancouver

Deschamps, J. S., Rossland

Dominion Creosoting Co., Ltd., The, Vancouver

Doukhobor Society, Brilliant

Duguid, J., (see Seaton Lake Mill)

\*East Kootenai Lumber Co., Jaffray

Eburne Sawmills, Ltd., Eburne

Edgewood Lumber Co., Ltd., Castlegar

Elk Lumber Co., Ltd., Fernie

False Creek Lumber Co., Vancouver

Fau Vel, P. W., Shingle Mill, Burnaby (Mill at Wolf Spur)

Fennell, Geo., Chu Chu

Fernridge Lumber Co., Ltd., New Westminster, also at Aldergrove

Fir Tree Lumber Co., Mt. Lehman

Forest Mills, Revelstoke, also Three Valley

Galbraith & Sons, New Westminster also Lincoln

Genoa Bay Lumber Co., Genoa Bay

Gibson's Landing Lumber Co., Gibson's Landing, also Howe Sound

Gill, E. L., Alberni

Graham & McFarlane, Denman Island

Granby Mining & Smelting Co., Granby Bay, (Mill at Anyox)

Haddon, J., & Son, (Elgin Lumber Co.), Elgin

Hanbury Lumber Co., Vancouver

Hanson, H. O., (See Bella Coola Lumber Co.)

BRITISH COLUMBIA—Con.

Harrison Bay Shingle Co., Harrison Mills  
 Haslem Creek Lumber Co., Ladysmith  
 \*Hastings Shingle Mfg. Co., Ltd., Vancouver  
 \*Heaps, E. H., & Co., Ltd., Vancouver  
 Hill-Tout & Anderson, Abbotsford  
 Hopp, John, (see Jack of Clubs Lake Mill)  
  
 Invermere Lumber Co., Wilmer  
 Iowa Lumber & Timber Co., Clowhom Falls  
 Island Lumber Co., Duncan  
  
 Jack of Clubs Lake Mill (Jno. Hopp, proprietor)  
 Barkerville  
 Jewell Lumber Co., Ltd., Hanbury  
 Johnston & Carswell, Vernon  
  
 Kelowna Sawmill Co., Kelowna  
 Kernaghan Lumber Co., Ltd., Salmon Arm  
 King Lumber Mills, Ltd., Cranbrook, also Yahk  
 Kipp, Son & Co., Chilliwack  
 Kirkpatrick, Thos., Vancouver (Mill at Hastings)  
 Koch, Wm. C. E., Koch Siding  
 Kootenay Shingle Co., Ltd., Salmo  
  
 Lambert & Bell, Granite Siding  
 Leask & Johnston, Mayook, also Ft. Steele  
 Lebeau, Frank, Ferguson  
 Leigh, Jas., & Sons, Victoria  
 Lemon, Gonnason & Co., Victoria  
 Lumby Saw Mill Co., Lumby  
 Lynn Valley Lumber Co., North Vancouver, (Mill  
 at Lynn Creek)  
 Lund, P., Wardner  
  
 McDougall, W. C., Princeton  
 McInnes Lumber Co., Elkmouth, (Mill at Crows-  
 nest)  
 McNair, Robert, Hastings  
 McPherson, H., Trout Lake  
 Maddough, J. A., Vancouver, (Mill at Yarrow)  
 Magee, W. H., Salmon Arm  
 Maple Grove Lumber Co., Ltd., Abbotsford  
 Maple Leaf Lumber Co., New Westminster  
 Menzies, J. A., Merritt  
 Monarch Lumber Co., Ltd., Savona  
 Moore Whittington Lumber Co., Ltd., Victoria  
 Mt. Lehman Lumber, Timber & Trading Co.,  
 Ltd., Mt. Lehman  
 Mundy Lake Shingle Co., Fraser Mills (Mill at  
 Millardville)  
 Munson, R., & Son, Kelowna  
  
 Nanooes Lumber Co., Ltd., Parksville  
 Newcastle Lumber Co., Ltd., Vancouver (Mill at  
 Nanooes Bay)  
 New Ladysmith Lumber Co., Ltd., Nanaimo  
 New Michel Sawmill Co., New Michel  
 Nicola Valley Pine Lumber Co., Canford  
 North Columbia Gold Mining Co., Discovery  
 Northern Construction Co., Kamloops  
 Northern Lumber Co., Ft. George  
 \*North Pacific Lumber Co., Ltd., Barnet  
 North Star Lumber Co., Elko  
 North Vancouver Lumber Co., North Vancouver  
  
 O. K. Lumber Co., Kelowna  
 Oliver, Jno., Delta

BRITISH COLUMBIA—Con.

Otis Staples Lumber Co., Cranbrook  
 Otter Shingle Co., Otter  
  
 Patterson, E. O., East Chilliwack  
 Peachland Lumber & Mfg. Co., Peachland  
 Peavine Lumber Co., Cranbrook  
 Pender Island Saw & Planing Mills, Pender Island  
 Pittsburg British Gold Mining Co., Atlin  
 Port Haney Lumber Co., Vancouver (also Haney)  
 Port Moody Shingle Co., Port Moody  
 Porto Rico Lumber Co., Ltd., Moyie  
 Powell River Co., Ltd., Powell River  
  
 Quance Sawmill, Nakusp  
  
 \*Rat Portage Lumber Co., Vancouver (Head Office  
 Winnipeg)  
 Reid, Jas., Estate of, Quesnel  
 Reilly, J. R., & Co., Tappen  
 Riverside Lumber Co., Natal (Head Office  
 Calgary, Alberta)  
 Robertson & Hackett, Vancouver  
 Rock Creek Lumber Co., Ltd., Cranbrook  
 Ross-Saskatoon Lumber Co., Waldo  
  
 Salmon River Lumber & Shingle Co., Sperling  
 Salmon River Land Co., Falkland  
 San Juan Lumber Co., Port Renfrew  
 Schelt Trading Co., Schelt  
 Seaton Lake Mill, Lillooet  
 Seymour Lake Lumber Co., Smithers  
 Shawnigan Lake Lumber Co., Ltd., Shawnigan  
 Lake  
 Silverton Lumber & Power Co., Silverton  
 Simpson, Ralph, Arrowhead  
 Smith, Thos. K., Armstrong  
 Small & Bucklin Lumber Co., New Westminster  
 South Shore Lumber Co., Vancouver  
 Sovereign Lumber Co., Annis  
 Sparwood Lumber Co., Sparwood  
 Standard Lumber Co., Ltd., Cranbrook  
 Summerland Timber Co., West Summerland  
 Summit Lake Lumber Co., Ltd., Summit Lake  
 Surrey Shingle Mfg. Co., Cloverdale  
 Symons, A. M., Nakusp  
  
 Taylor Lumber Co., Ltd., The, Kimberley  
 Terminal Lumber & Shingle Co., Vancouver  
 Timberland Lumber Co., New Westminster  
 Tomkinson, Arthur, Deep Creek  
 Trail Lumber Co., Ltd., Paulson  
  
 \*Vancouver Lumber Co., Ltd., Vancouver  
 Vancouver-Nanaimo Coal Mining Co., Ltd., Van-  
 couver  
 Vancouver Power Co., Coquitlam  
 Varsveld Bros., Fruitvale  
 \*Victoria Lumber & Mfg. Co., Ltd., Chemainus  
  
 Wellesley Lumber Co., South Wellington  
 Western Box & Shingle Mills, Nelson  
 Western Canada Timber Co., Ltd., Nelson  
 Western Pine Lumber Co., Ltd., Grand Forks  
 Westholm Lumber Co., Sicker Siding  
  
 Yahk Lumber Co., Ltd., Yahk

## APPENDIX No. 2.

### LIST OF ACTIVE CANADIAN PULP-MILLS.

The following is a list of firms operating pulp-mills in Canada in 1913 to whom the Forestry Branch is indebted for the data upon which this bulletin is compiled:

#### QUEBEC.

- Basin Electric Light and Power Co., Ltd., Montmagny—Ground-wood Pulp.
- Belgo-Canadian Pulp and Paper Company, Ltd., Shawenegan Falls - Ground-wood Pulp.
- Brompton Pulp and Paper Company, Ltd., Bromptonville—Ground-wood Pulp.
- Brompton Pulp and Paper Company, Ltd., East Angus (2 mills)—Ground-wood Pulp and Sulphite Fibre.
- Canada Paper Company, Ltd., Windsor Mills (2 mills) - Ground-wood Pulp and Soda Fibre.
- Chicoutimi Pulp Company, Chicoutimi—Ground-wood Pulp.
- Dalmas Pulp Company, Dalmas—Ground-wood Pulp.
- Dominion Paper Company, Kingsey Falls (2 mills), (office Montreal) - Ground-wood Pulp and Sulphate Fibre.
- Edciv, E. B., Co., Ltd., Hull (2 mills)—Ground-wood Pulp and Sulphite Fibre.
- Jonquiere Cartier Pulp and Paper Company, Pont Rouge (office Montreal) - Ground-wood Pulp.
- Jonquieres Pulp Company, Ltd., Jonquieres (2 mills)—Ground-wood Pulp and Sulphite Fibre.
- Lake Megantic Pulp Company, Lake Megantic—Ground-wood Pulp.
- Laurentide Company, Limited, Grand Mère, (2 mills)—Ground-wood Pulp and Sulphite Fibre.
- Maclaren, James, Company, Ltd., Buckingham—Ground-wood Pulp.
- Menier Estate, Ellis Bay, Anticosti Island—Ground-wood Pulp.
- News Pulp and Paper Company, Ltd., St. Raymond (office Montreal), —Ground-wood Pulp.
- Nicolet Falls Pulp and Lumber Company, Nicolet Falls—Ground-wood Pulp.
- North Shore Power Railway and Navigation Co., Clarke City—Ground-wood Pulp.
- Ouatchouan Falls Paper Company, Ouatchouan Falls (office Chicoutimi) - —Ground-wood Pulp.
- Price Brothers and Company, Ltd., Kenogami (office, Jonquieres) (2 mills)—Ground-wood Pulp and Sulphite Fibre.
- Price-Porritt Pulp and Paper Company, Rimouski—Ground-wood Pulp.
- Quebec and St. Maurice Industrial Company, La Tuque (Office Portland, Maine)—Sulphate Fibre.
- River du Loup Pulp Company, Ltd., Fraserville -Ground-wood Pulp.
- Soucy, F. Florentin, St. Antonin (office, Old Lake Road)—Ground-wood Pulp.
- Union Bag and Paper Company, Cap Magdeleine (office New York, N.Y.) —Ground-wood Pulp.
- Wayagamack Pulp and Paper Company, Ltd., Three Rivers—Sulphate Fibre.
- Wilson, J. C., Ltd., St. Jerome—Ground-wood Pulp.

## ONTARIO.

- Bronson Company, Ottawa—Ground-wood Pulp.  
 Booth, J. R., Ottawa (2 Mills)—Ground-wood Pulp and Sulphite Fibre.  
 Colonial Wood Products Company, Ltd., Thorold—Ground-wood Pulp.  
 Davy Pulp and Paper Company, Ltd., Thorold—Ground-wood Pulp.  
 Dryden Timber and Power Company, Ltd., Dryden—Sulphate Fibre.  
 Foley-Rieger Pulp and Paper Company, Ltd., Thorold—Ground-wood Pulp.  
 Lake Superior Paper Company, Ltd., Sault Ste. Marie (2 mills) (now Spanish River Pulp and Paper Mills, Ltd.)—Ground-wood Pulp and Sulphite Fibre.  
 Northumberland Paper and Electric Company, Ltd., Campbellford—Ground-wood Pulp.  
 Ontario Paper Company, Ltd., Thorold—Ground-wood Pulp.  
 Toronto Paper Manufacturing Company, Ltd., Cornwall—Sulphite Fibre.  
 Riordon Pulp and Paper Company, Ltd., Hawkesbury—Sulphite Fibre.  
 Riordon Pulp and Paper Company, Ltd., Merritton—Sulphite Fibre.  
 Spanish River Pulp and Paper Mills, Ltd., Sturgeon Falls (2 mills)—Ground-wood Pulp and Sulphite Fibre.  
 Spanish River Pulp and Paper Mills, Ltd., Espanola—Ground-wood Pulp.  
 Thorold Pulp Company, Ltd., Thorold—Ground-wood Pulp.

## NOVA SCOTIA.

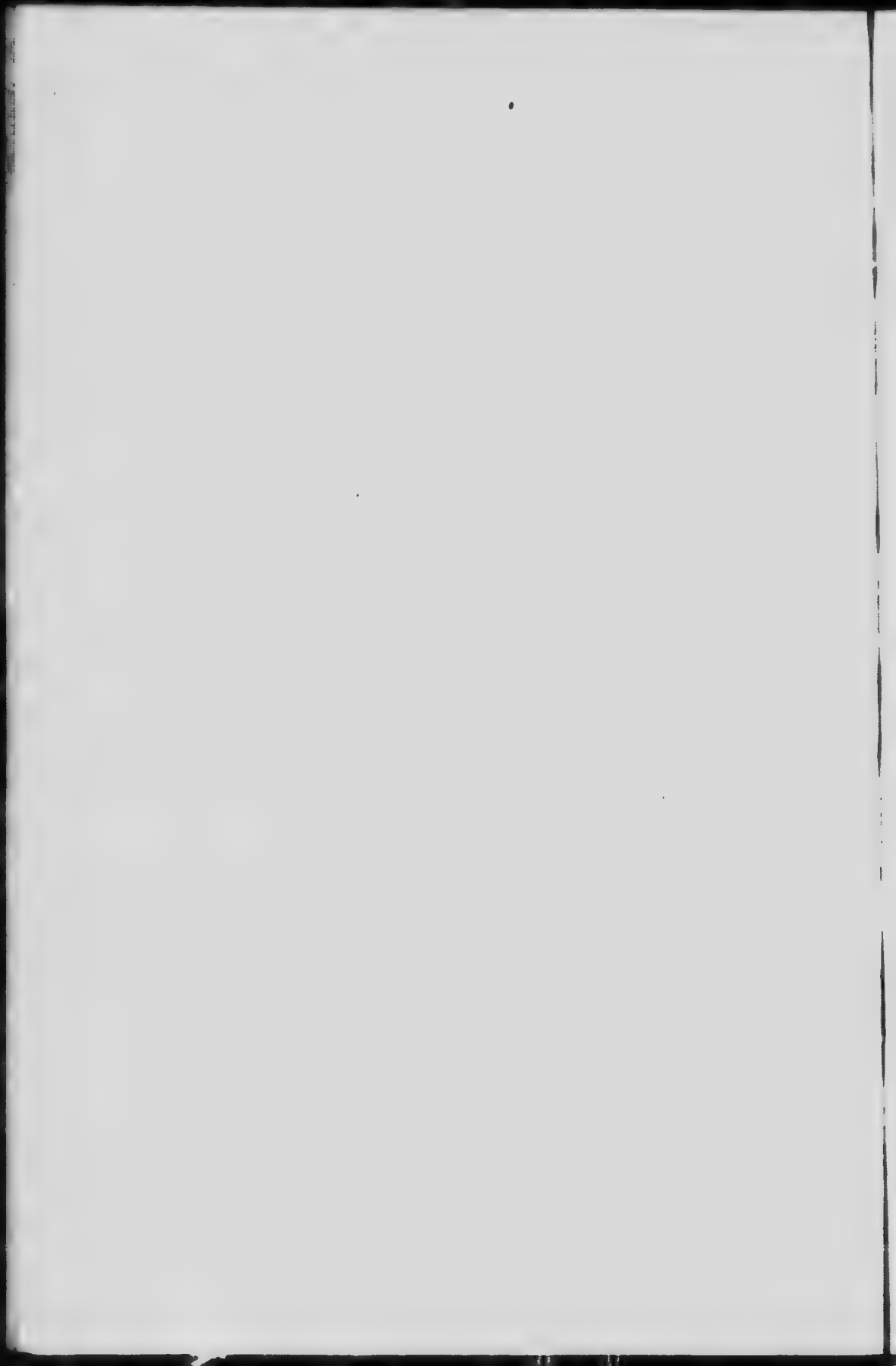
- Campbell Lumber Company, Ltd., Weymouth, (2 mills)—Ground-wood Pulp.  
 Clyde River Pulp and Paper Company, Ltd., Clyde River—Ground-wood Pulp.  
 La Have Pulp Co., Ltd., New Germany (office Bridgewater)—Ground-wood Pulp.  
 MacLeod Pulp Company, Ltd., Milton (2 mills) (office, Liverpool)—Ground-wood Pulp.

## NEW BRUNSWICK.

- Dominion Pulp Company, Ltd., Chatham—Sulphite Fibre.  
 New Brunswick Pulp and Paper Co., Ltd., Millerton—Sulphate Fibre.  
 Partington, Edward, Pulp and Paper Company, Ltd., St. John—Sulphite Fibre.  
 St. George Pulp and Paper Company, Ltd., St. George—Ground-wood Pulp.

## BRITISH COLUMBIA.

- British Columbia Sulphite Fibre Company, Ltd., Mill Creek, Howe Sound, (office, Vancouver)—Sulphite Fibre.  
 Powell River Company, Ltd., Powell River (2 mills)—Ground-wood Pulp and Sulphite Fibre.

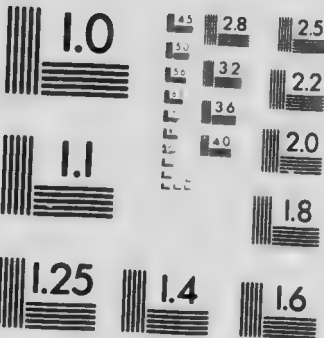






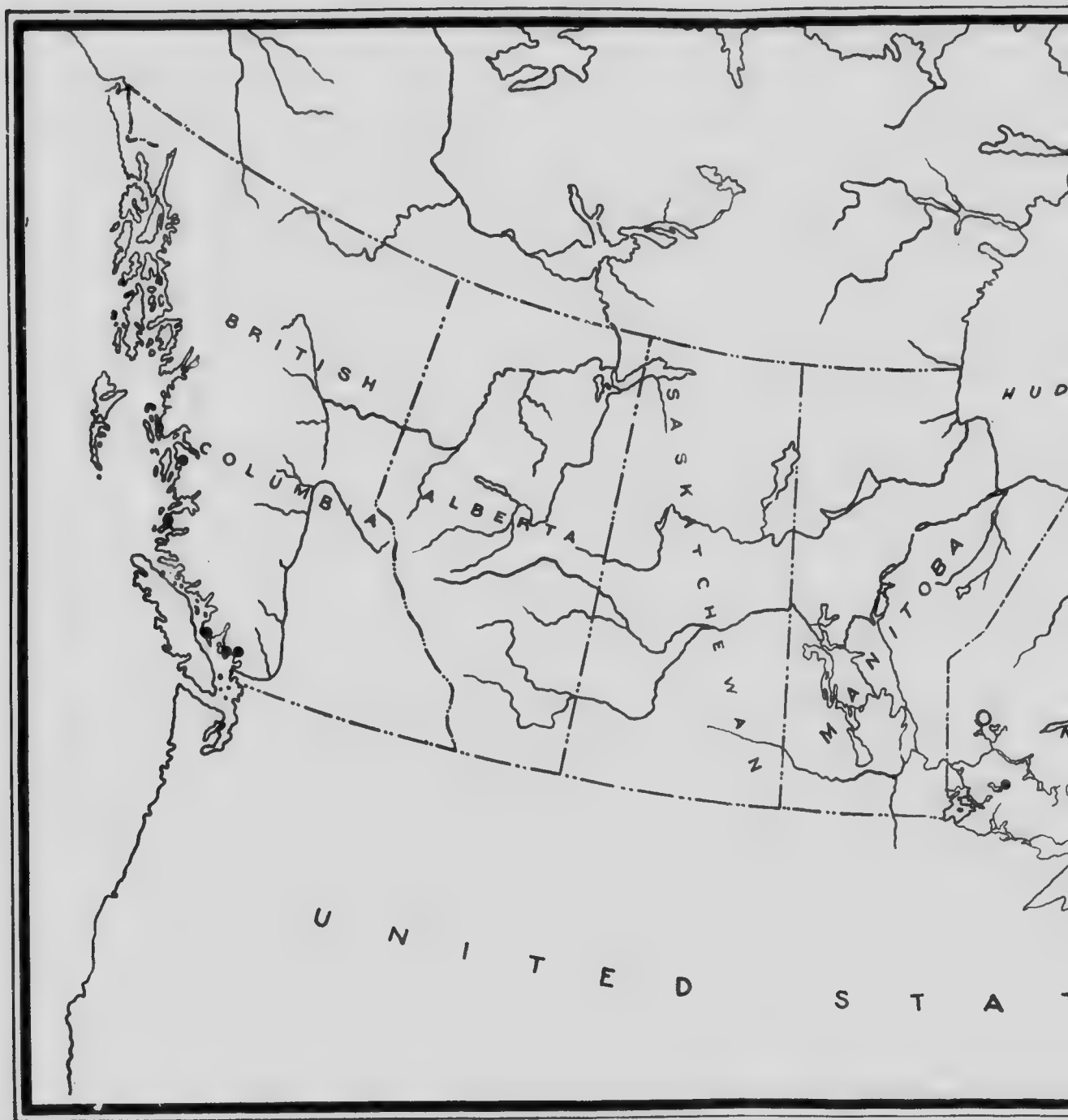
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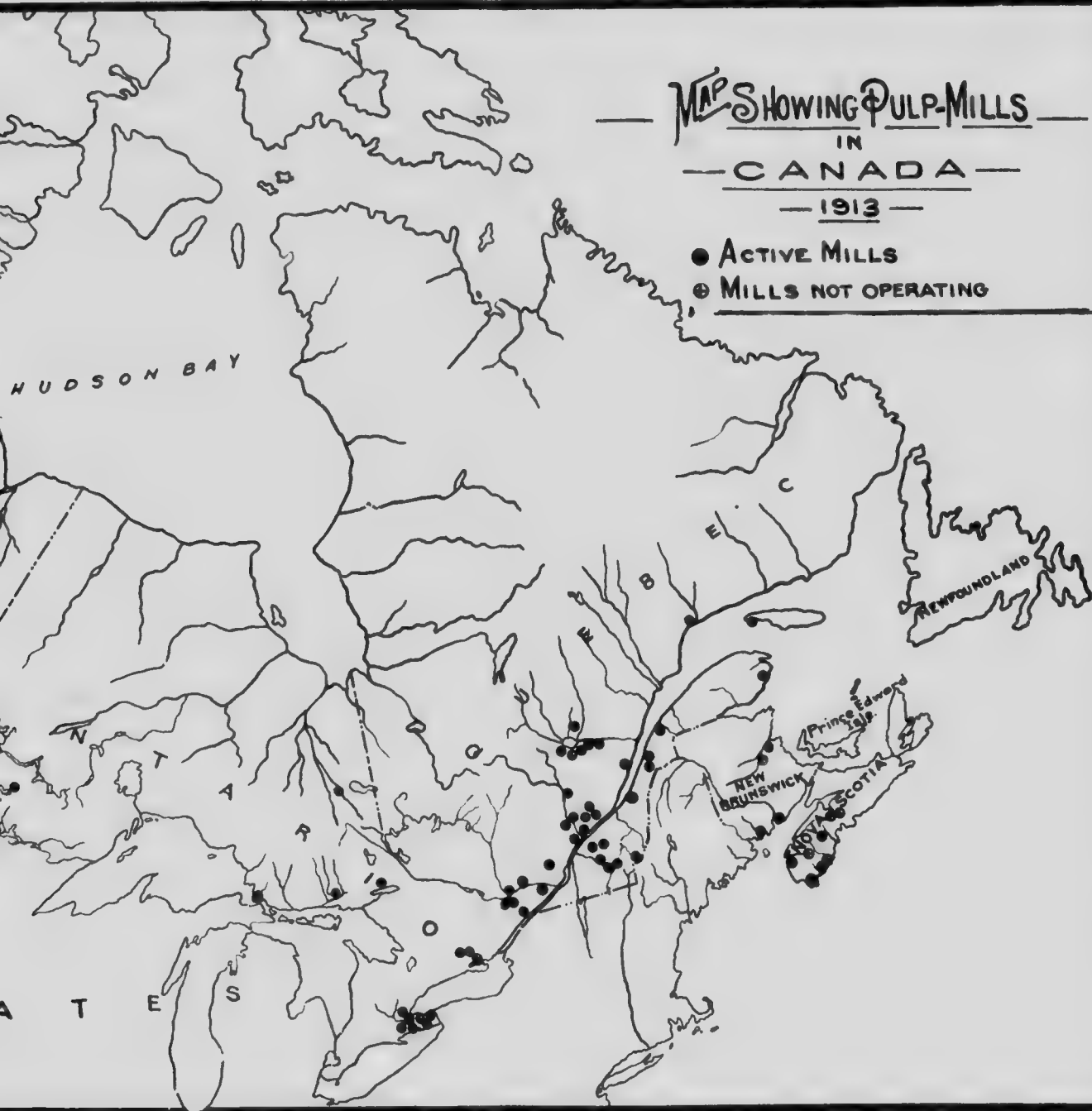
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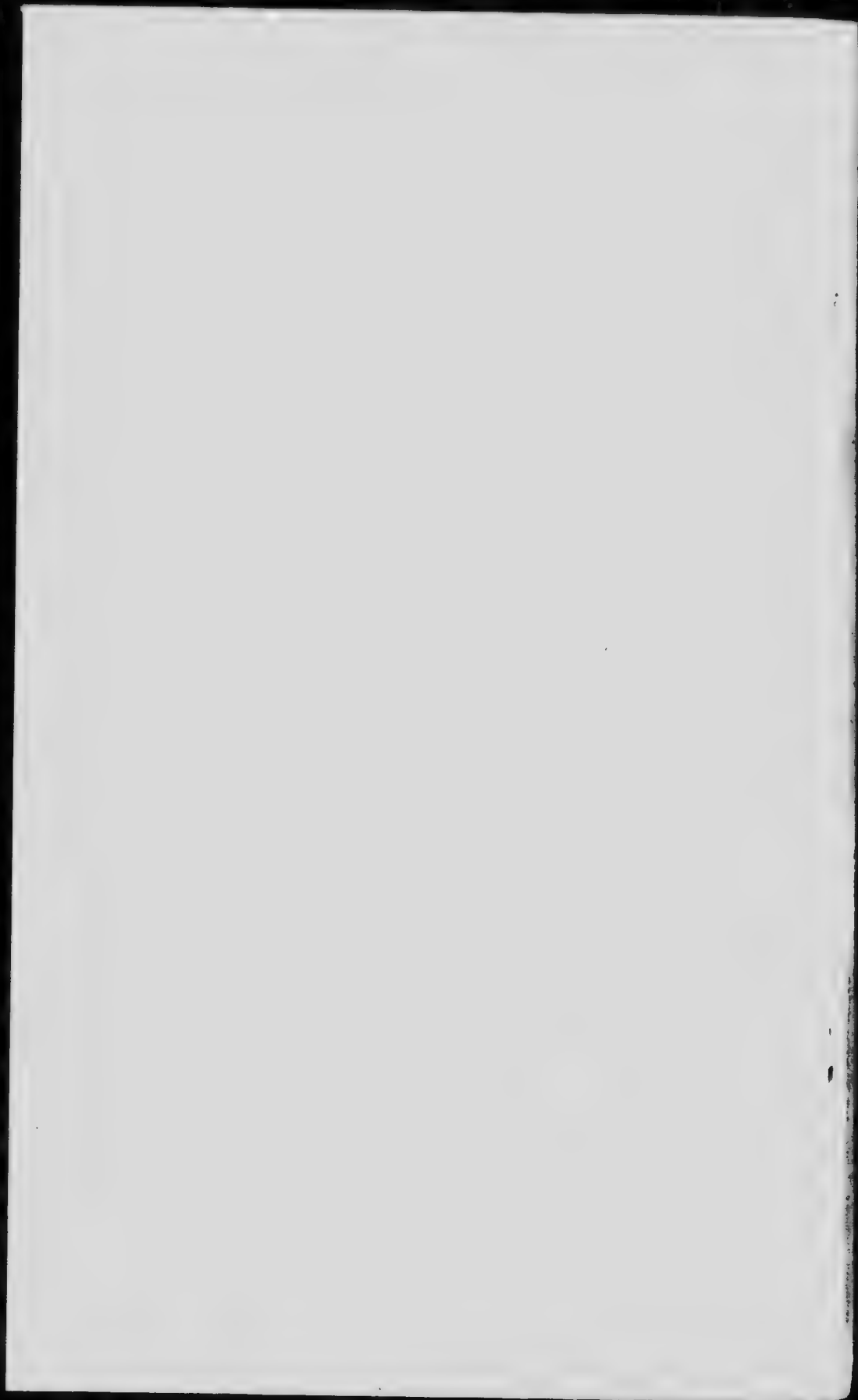
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716 482-3100  
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— MAP SHOWING PULP-MILLS —  
IN  
— CANADA —  
— 1913 —

- ACTIVE MILLS
- MILLS NOT OPERATING





THE HISTORY OF THE UNITED STATES

OF THE UNITED STATES OF AMERICA  
FROM 1776 TO 1876  
BY  
JAMES M. SMITH  
NEW YORK  
1876

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" 11. Forest Products of Canada, 1909: Lumber, Square Timber, Lath and Shingles.

" 12. Forest Products of Canada, 1909: Pulpwood.

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